Digest

IN THIS ISSUE

A Simplified Method of Pain Control 172

Restoration of Upper Anterior Teeth With Gold Inlay and Silicate 175

A Rest Splint for the Relief of Traumatic Condylar Intrusions 178

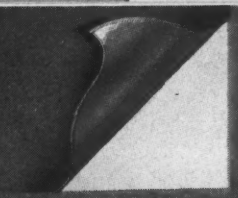
Odontoma: Reports of Two Cases 182

Clinical and Laboratory Suggestions 184

Medicine and the Biologic Sciences 187

The Editor's Page.. 186 Contra-Angles.. 192

Surface Anesthesia of the Mucous Membrane (An Abstract) 202



USE THE **YELLOW** TO SEE THE RED

USE THE RED TO SEE THE **YELLOW**

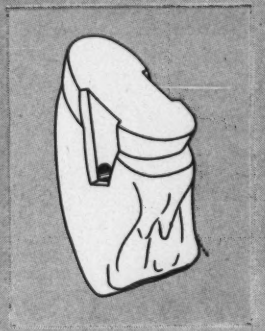
USE THE **LIGHT** TO SEE THE DARK

USE THE DARK TO SEE THE **LIGHT**

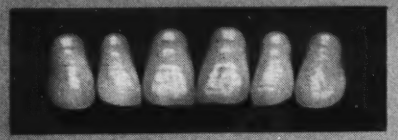
DR. FRENCH'S POSTERIORS

The most accurate—the most simple system for matching tooth colors, is built-in the Veri-chrome Color Guide. It is a contrast-comparison system which eliminates the likely inaccuracies of guesswork.

Tooth color selection by contrast-comparison is possible only with the Veri-chrome Color Guide because of its systematic arrangement



ANTHROTOMIC ANTERIORS



FIVE-PHASE ANTERIORS

of dominantly yellow and red tooth colors in progressive saturations . . . and because of the controlled brilliance of the colors.

Write for brochure on Veri-chrome System for Selecting tooth colors by the contrast-comparison method

BE SURE TO SPECIFY WITH THE VERI-CHROME COLOR GUIDE

NUFORM TUBE TEETH

Veri-chrome

tooth colors now available in

FIVE-PHASE ANTERIORS ANTHROTOMIC ANTERIORS DR. FRENCH'S POSTERIORS
NUFORM ANTERIORS AND POSTERIORS

Vol. 53, No. 4

Dental Digest

APRIL 1947

A Simplified Method of Pain Control
John A. Sherman, D.D.S. 172

Restoration of Upper Anterior Teeth With Gold Inlay and Silicate
Earl H. Zimmer, D.D.S. 175

A Rest Splint for the Relief of Traumatic Condylar Intrusions
R. L. Westcott, D.D.S. 178

Odontoma: Reports of Two Cases
Robert A. Robinson, D.D.S. 182

Clinical and Laboratory Suggestions 184
1. Preparing Interproximal Wedges. 2. Locating an Infected Deciduous Tooth. 3. Making an X-Ray Beneath a Rubber Dam. 4. A Constant Supply of Room Temperature Water. 5. Flap Formation in Root Resection. 6. Transitional Celluloid Crown.

Medicine and the Biologic Sciences 187

The Editor's Page 186

Contra-Angles 192

Surface Anesthesia of the Mucous Membrane (An Abstract) 202

Acute Secondary Parotitis (An Abstract) 206

About Our CONTRIBUTORS

JOHN A. SHERMAN received his D.D.S. degree from the Royal College of Surgeons, Toronto, in 1924. He presents in this issue a method of reducing frictional heat during cavity preparation by applying water and air in the form of a vapor spray. A handpiece attachment and equipment developed for generating the spray are described in the article, A SIMPLIFIED METHOD OF PAIN CONTROL.

EARL H. ZIMMER, D.D.S. (Northwestern University, Dental School, 1915) has presented the subject of his article in this issue as a clinic a number of times, supplementing it with Kodachrome movies and slides. The procedure described restores the incisoproximal angles of upper anterior teeth with gold inlay and silicate.

RANDALL L. WESCOTT D.D.S. (Indiana University, School of Dentistry, 1923) is a general practitioner whose special interest is periodontics. In September 1936 the DIGEST published his review and discussion of the dental literature on the traumatizing effect of disturbances in occlusion on the structures in and around the glenoid fossa. Doctor Wescott's continuing interest in this subject is reflected in his article, A REST SPLINT FOR THE RELIEF OF TRAUMATIC CONDYLAR INTRUSIONS.

ROBERT A. ROBINSON, D.D.S. (The Thomas W. Evans Dental Institute, University of Pennsylvania, 1917) is an oral surgeon. In our August 1946 issue he and Doctor Perry R. Skinner described their experiments with intraosseous metal implants in denture stabilization. Doctor Robinson's second DIGEST article reports the history, examination, and surgical treatment in two cases of odontoma.

EDWARD J. RYAN, B.S., D.D.S., Editor
MARIAN ZIERATH, B.S., *Assistant Editor*
708 Church Street, Evanston, Illinois

Copyright, 1947, by Dental Digest, Inc. See page 168 for subscription data, etc.
The magazine is mailed on the fifteenth of the month of issue.

A Simplified Method of PAIN CONTROL

JOHN A. SHERMAN, D.D.S., Toronto

DIGEST

The method described performs a twofold function with regard to pain: It minimizes the physical and psychologic effects of drilling by (1) cooling the bur and (2) giving the patient a part in the treatment procedure which tends to suppress his anticipation of pain.

Air and water are used in the form of a vapor spray, atomized by a patient-controlled atomizer head connected by a rubber tube with a simple attachment on the contra-angle or straight handpiece.

Spraying is simultaneous with drilling; thus time is saved, visibility is improved, the danger of infection is reduced, and instruments are kept clean and sharp.

THE NEED for a simple method of thermal control of frictional heat during cavity preparation prompted me to experiment with various types of attachments to produce tooth cooling. The use of water only or air alone I found to be inadequate because of the obvious disadvantages of poor visibility. On experimentation an atomized water spray gave the best results. It has proved in the past three years to be the method best suited for use in my own practice and in other practices.

The equipment which I have developed consists of a specially designed atomizer (Fig. 4) and two spray attachments, one for the contra-angle and the other for the Doriot handpiece, which readily snap on or off (Figs. 1 and 2). They require the minimum amount of fitting, are not cumbersome, and are scarcely noticed when in use. For generating the spray, the special atomizer-valve (Figs. 3 and 4) is attached to the spray bottle, to which the handpiece spray attachments then are connected by rubber tubing.

With this equipment it has become possible to reduce frictional heat by cooling the bur and consequently keeping the pulp and dentine cool. This method of operating does not completely block out pain but reduces it to more tolerable levels and patients report that there is very little discomfort as a result.

Advantages of Method

Reduction of Trauma—1. Spraying the cavity as treatment proceeds keeps the dentine continually moist.

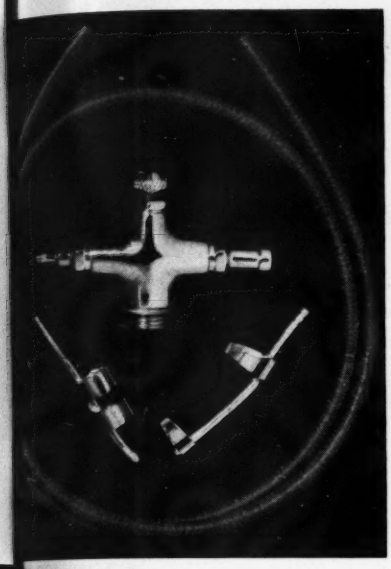
By the elimination of overheating in this way damage to the pulp is avoided.

2. Carious tooth matter is flushed out ahead of the bur, stone, or dia-

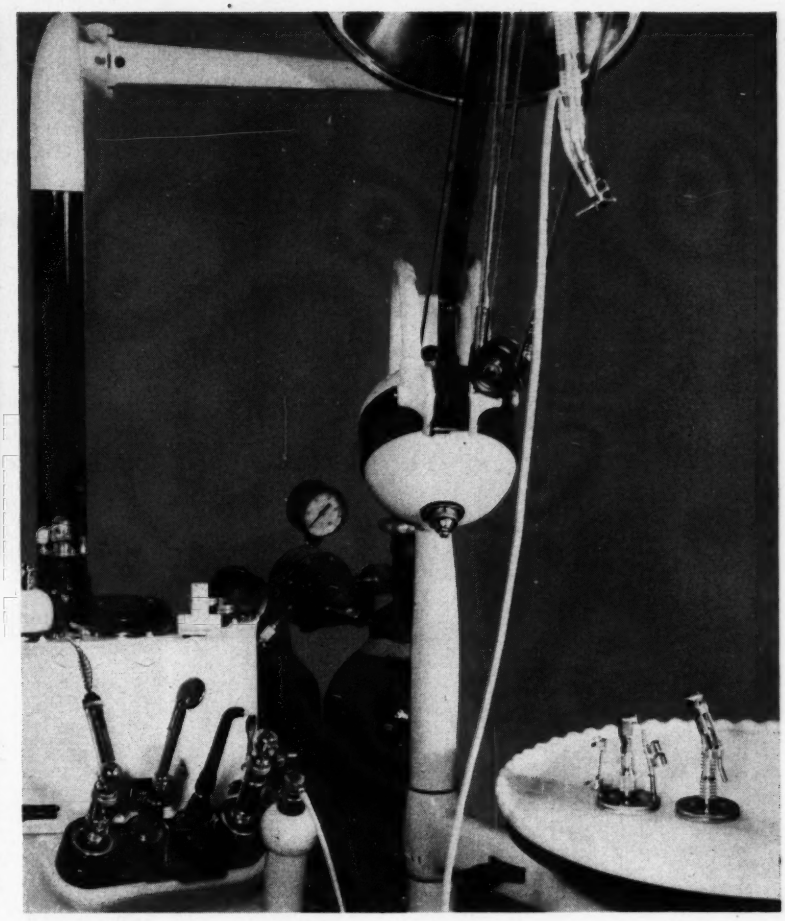
1. *Simple clip-on type of spray attachment for contra-angle.*

2. *Simple slip-on type of spray attachment for doriot.*

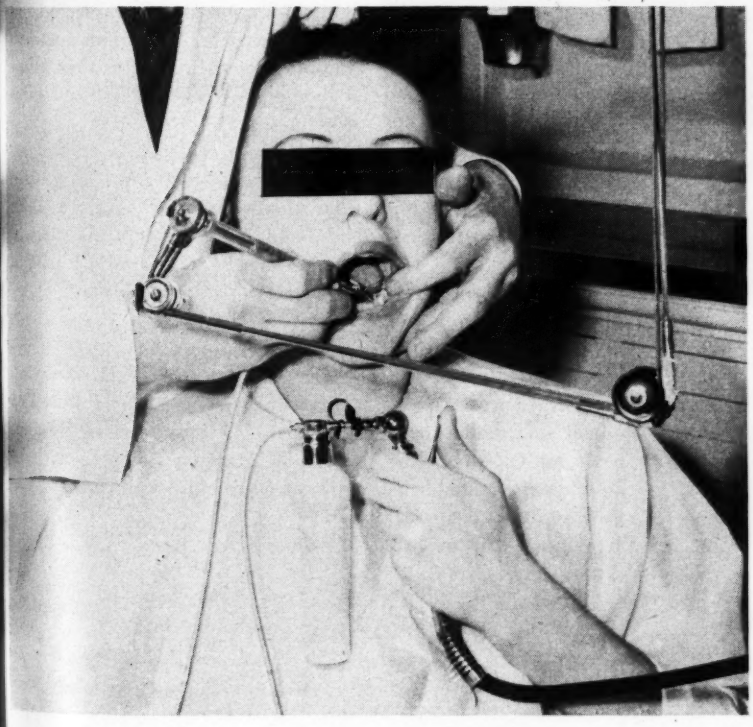
*(Figures 1, 2, and 3 by courtesy of Hanau Engineering Company, Inc.)



3. ***Special atomizer-valve, rubber tubing, and contra-angle and doriot spray attachments.***



4. ***Equipment connected for use: regular air cut-off on the unit, spray bottle assembled with atomizer-valve and tubing leading to contra-angle handpiece attachment. (Compressed air can be utilized from regular compressor in office or oxygen tank with regulator as shown in background.)***



mond point and not forced into the dentine or pulp to cause infection.

Increased Visibility—There is less liquid in the mouth inasmuch as a finely atomized vapor spray is used rather than a jet of water. The air in this spray blows water and saliva ahead of it and out of the cavity; the water washes away the sludge of saliva and tooth debris. Drilling, spraying, and cleansing of the cavity occur simultaneously.

Time-Saving Factor — Operating time is cut in half. The method permits continuous and faster operating with a high degree of safety to the tooth. It is possible to do double the amount of work at each appointment, for drilling and filling can be done in the same day.

5. ***Patient controls flow of atomized spray of water and air by pressing the lever of air cut-off when operating starts and releasing it when operating stops.***

6. ***Metal cylinder containing heavy mineral oil, set into the spray bottle well on the unit, serves for lubrication and sterilization of both the handpiece and attachment.***

Psychologic Reaction—This method relaxes the patient by providing for participation in the operation and thus diverts his attention from thoughts of drilling.

Effect on Instruments—Burs and diamond points remain clean and do not clog. Cutting edges of burs remain sharp and last much longer.

Equipment

It is necessary to have compressed air in the office. Either a compressor or a cylinder of oxygen with a pressure regulator will suffice. It should lead to a regular air cut-off on the unit (Fig. 4). Pressure should be maintained at 15 to 20 pounds.

To place the equipment in use, attach the spray bottle to the atomizer valve, connect to the air cut-off, and join the rubber tubing between the atomizer head and the contra-angle or straight handpiece spray attachment (Fig. 4). The dentist himself can do this in less than a minute.

Warm water at about 120 Fahrenheit is used in the spray bottles; that is all. Patient control is achieved by directing the patient to press the lever on the air cut-off when operating starts and to release it when operating stops (Fig. 5).

Care and Sterilization of the Handpiece

Naturally this method presents the problem of corrosion involving the gears of the handpiece. To overcome this, use the spray-bottle well on the unit for lubrication and sterilization (Fig. 6).

1. Place heavy mineral oil in a metal cylinder set into the well, and turn the heat regulator to the highest position. (Our experiments have shown that the top temperature approximates 225° Fahrenheit which allows complete sterilization of the handpiece after each patient.)

2. Run the handpiece, with the spray attachment in position but with the rubber tubing disconnected, in this lubricant for 30 seconds forward and 30 seconds in reverse; then allow it to remain in the oil bath 10 minutes longer.

3. Lift out the handpiece and attachment at the end of this time, and allow the excess oil to drain off. Both the handpiece and attachment will have received proper lubrication and sterilization.

Comment

This method is a remarkable improvement over the use of water or air separately inasmuch as it combines the advantages of both without their respective disadvantages.

329 *Bloor Street West.*

RESTORATION *of Upper Anterior Teeth with Gold Inlay and Silicate*

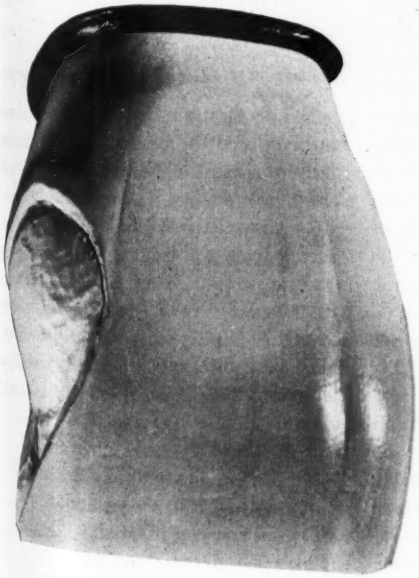
EARL H. ZIMMER, D.D.S., Colorado Springs

DIGEST

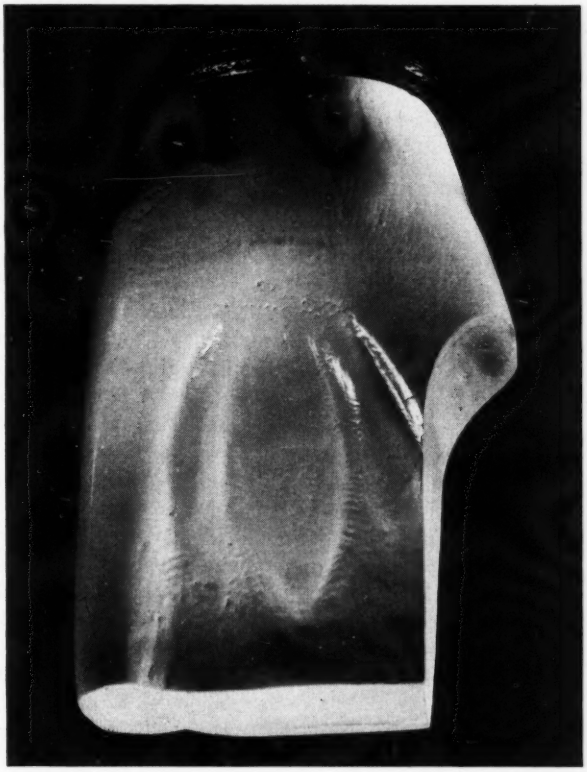
A minimum of tooth structure is removed in this procedure for restoring the incisoproximal angles of upper anterior teeth by means of a cast gold inlay and a labial veneer of silicate. Retention is gained by moderately deep grooves and carefully placed pin holes on the proximal and incisal edges. To prevent the incisal edge from fracturing, it is entirely covered with the casting. Emphasis is placed on restoring the natural contour of the tooth.

RESTORING teeth in which proximal surfaces are involved to the extent of including the incisoproximal angle (Fig. 1) is a challenge to the exacting dentist. Restorations in these cases should be planned in such a way that a minimum of tooth structure will be removed and the normal contour of the tooth restored.

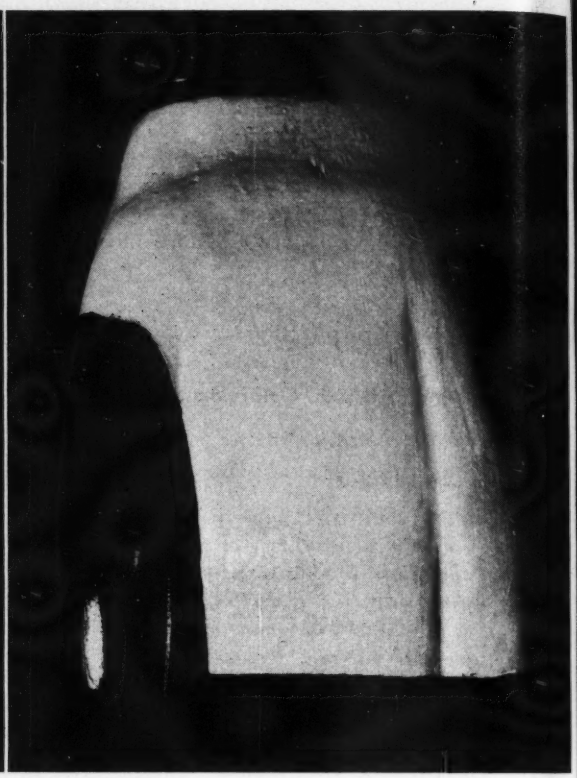
All unsupported enamel must be removed to ensure against a fracture later and also to prevent a dark shadow caused by the translucency of such enamel. In extremely deep cavities the deepest portion may be filled with a light-colored or matching base of cement provided there is some dentine supporting that part of the enamel. Fracture of the incisal edge should be prevented by covering it entirely with the casting. The incisal retention pin can then be brought laterally to a thicker portion of the tooth where it is less likely to cast a shadow.



1. *An extensive proximal cavity is shown that involves the incisal angle.*



2. *Lingual view showing reduction of the proximal surface and the bevel of the incisal edge.*



3. ***Proximal view showing groove along axial and incisal walls with pin holes at the gingival and near opposite incisal angle.***

Preparation of the Tooth

Grinding Incisal Edge—1. The incisal edge should be beveled somewhat acutely.

a) Remove the minimum of enamel from the labial portion of the incisal edge; take more off the lingual (Fig. 2).

b) This procedure obviates the need to display much gold on the incisal edge and avoids shortening the tooth.

2. The natural contour should be preserved instead of having a straight incisal edge.

3. The grinding can be accomplished with a fine grain carborundum stone and finished with a fine sandpaper disc.

Retention on Proximal—Using a safesided carborundum disc, carry the proximal outline laterally just enough to remove overhanging enamel and gingivally to the immune area.

1. Obtain retention in the proximal portion by squaring the gingival seat and carrying a not too deep groove to the incisal with a number 700 tapering crosscut fissure bur (Fig. 3).

2. To supplement this, sink a moderately deep pin hole in the gingival seat with a number 1 round bur. (This hole should not be too close to the side of the root as this surface converges and fracture of the wall of the tooth may occur beneath the gingiva.)

3. Square the pin hole with a 700 bur, thus enlarging the diameter of the hole slightly.

Retention on Incisal—1. The same procedure is used to make a pin hole on the incisal edge near the corner opposite the one to be restored. This incisal pin hole should be placed well toward the lingual portion as the pin will show through the enamel on the labial if it is too close to the surface.

2. With a small knife-edge stone, make a shallow groove across the incisal from the incisal pin hole to the groove in the proximal portion.

The cavity and pin holes are then treated with a suitable varnish. This completes the necessary retention for the casting. The preparation must be done painstakingly but the procedure is not long and difficult.

4. ***Wax pattern fully contoured.***

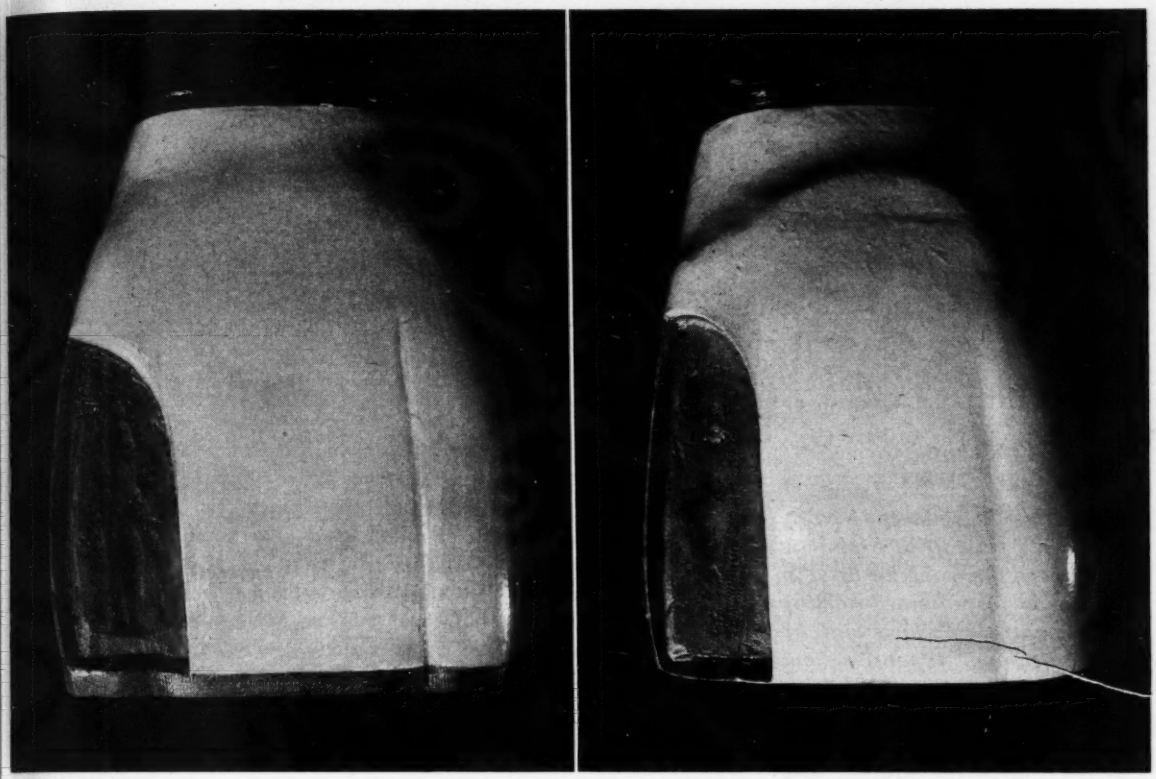
Making the Wax Pattern

1. The wax may be forced to place and confined by means of a trimmed and lubricated celluloid tooth form until the wax has cooled.

2. The excess of wax may be removed from the lingual with a warm egg-shaped burnisher and the labial and incisal excess with a suitable carver. (I purposely leave the incisal wax thicker or longer until it is cast because it is difficult to handle without fracturing when too thin.)

3. It is well to make sure that wax is occupying the pin holes by using a moderately hot root canal plugger which is somewhat smaller than the holes.

4. Carve the wax pattern carefully to restore the normal tooth anatomy (Fig. 4) remembering that it is much



5. *Wax pattern with cut-out on labial.*

easier to execute the restoration in wax than in gold.

a) Cut the labial portion of the wax out so that it extends deep enough to give a good thickness of silicate later and far enough into the interproximal space to prevent gold from showing through on that surface (Fig. 5).

b) Carve the incisal line of the wax on the same level and curve as the incisal line of the tooth.

The wax pattern is withdrawn by means of a staple-shaped sprue. Careful handling and reproduction of the wax pattern will enable the operator to place the gold casting with finger pressure.

Final Steps

1. After the casting has been made and found to fit precisely, the next step is to reduce the incisal portion of gold and polish the margins (Fig. 6).

2. Set the inlay with a light cement.

3. Free the labial portion of excess cement after it has started to set.

4. Apply the silicate cement for the veneer (Fig. 7). (It is well to select a shade of silicate before isolating the tooth to set the inlay.)

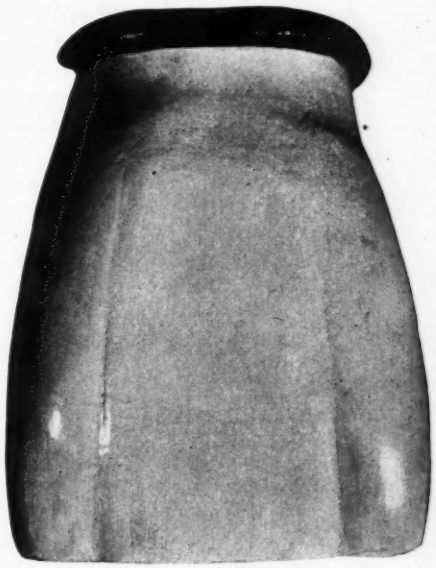
If this tooth is one that is not kept moistened, the silicate will not retain its shade and then it will be necessary to use a baked porcelain veneer or an acrylic veneer. Silicate will dissolve very rapidly in some mouths. In these cases I use either baked porcelain or acrylic.

Comments

This restoration is more conservative than the porcelain jacket, in cases involving only an incisal angle, and less likely to be fractured. It should be understood, however, that the silicate will have to be replaced from time to time.

415 *Exchange National Bank Bldg.*

6. *Casting cemented in position after reduction of the incisal portion.*



7. *Labial view showing silicate veneer placed over casting.*

A REST SPLINT *for the Relief of Traumatic Condylar Intrusions*

R. L. WESCOTT, D.D.S., Evanston, Illinois

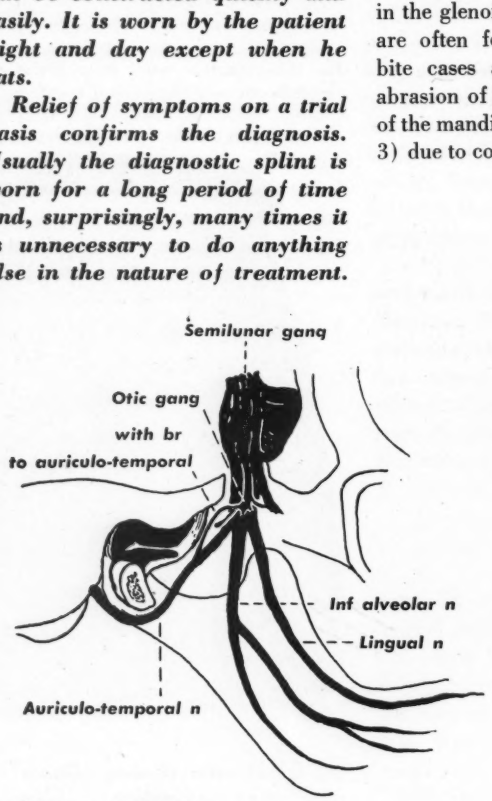
DIGEST

Dentists can test the possibility of relieving patients of traumatic intrusion of the condylar head in the glenoid fossa before starting a treatment plan which may be time-consuming, expensive, and unsuccessful. A temporary rest splint which covers the palate and overlaps the anterior teeth can be constructed quickly and easily. It is worn by the patient night and day except when he eats.

Relief of symptoms on a trial basis confirms the diagnosis. Usually the diagnostic splint is worn for a long period of time and, surprisingly, many times it is unnecessary to do anything else in the nature of treatment.

DURING THE last ten or fifteen years, there have been spasmodic outbursts of enthusiasm among groups of dentists who have succeeded in relieving their patients of certain symptoms described as the "Costen Syndrome." (Fig. 1) Specifically, these symptoms include: loss of hearing, head noises, vertigo, and various reflected pains caused by abnormal pressure of the head of the mandibular condyle in the glenoid fossa. These symptoms are often found in acquired closed bite cases and are caused by: 1) abrasion of the teeth; 2) nonsupport of the mandible due to loss of teeth, or 3) due to collapse of the arch through resorption of the alveolar bone.

The dentist searching for a technique or method by which to restore a mouth to an occlusion normal for his patient is almost hopelessly confused by conflicting schools of thought. He must always remember, however, that there really are men in his profession who, because of much study, ability, and concepts of the ideal, can perform the task of full mouth reconstruction so well that it seems as though they are guided by the superhuman. Most of us do not have that great ability or, because of the pressure of routine practice, the time or patience necessary to do this type of work; and our patients do not have the financial means to pay for it.

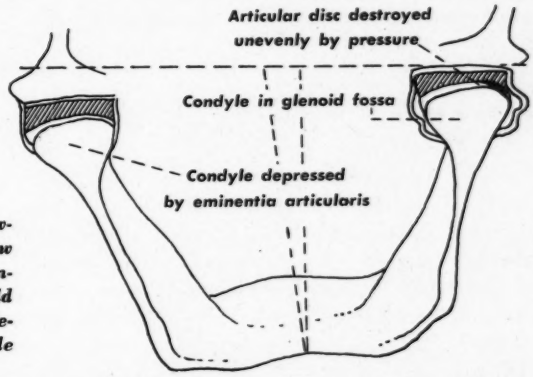


1. *Diagram showing interrelation of the various nerves in this region.*

2. *Patient referred for diagnosis and treatment. All posterior teeth are missing and a deep overbite is present. Symptoms complained of were: severe pain in condyle region, head, and back of neck; trouble with vision, except when jaws were held apart. History of repeated inflations of eustachian tubes for relief of stuffiness in ears.*

3. *A method of feeling the amount of backward thrust of the mandible used by the late Doctor George Monson. (Note evidence of discomfort of patient.) In this case there is a definite abnormal intrusion.*

4. *These mounted casts show how vertical dimension has been lost in this case, allowing the posterior edentulous ridges to rest on each other.*



5. *A schematic drawing which shows how unilateral loss of mandibular support could cause pressure and destruction on one side only.*

The otolaryngologist conversant with "Costen's research," however, may ask the dentist to accept a patient whom he believes can be benefited through the relief of a closed bite. When the dentist thinks of all the recommended techniques and, perhaps, unfortunate past experiences with them; of the unpredictability of favorable results and the great expense involved for both dentist and patient, the temptation is to decline the case. In his mind is the question: Can I help the patient or not?

The problem presented is to devise a means of opening the patient's bite quickly without great expense or effort and without doing damage to dental structures so that, if treatment is not successful, the dentist-patient relationship is not strained. I used temporary cast metal splints cemented over posterior teeth for many years for the purpose of relieving condyle pressure and achieving a comfortable dimensional correction. This method was satisfactory except for the vast amount of diagnostic measures and laboratory work required.

In order to cooperate with the otolaryngologist, it is imperative that the dentist be able to diagnose the case by observation of the patient only and thus decide whether he can be of any help.

6. *Baseplate with a lingual shelf of wax on anterior portion. Patient is told to bite into this cautiously to form a functional impression. Relief of condyle pressure is checked carefully by means of ear test (Fig. 3).*

7. ***Functional wax impression on baseplate (right). Completed splint with functional shelf processed in clear plastic (left). (Posterior teeth on splint are for esthetics.)***

Diagnostic Procedure

Facial expressions, profiles, mandibular movements and habits in talking, evidences of pain (Fig. 3), hearing tests, condyle intrusions, and related signs are all integral factors in diagnosis. It is interesting and stimulating to observe these.

Routine Examination—1. Inquire of the patient concerning his disorder. He will speak freely and much information can be gained from him.

a) How long has he been bothered?

b) How severe is the pain?

c) Is pain constant or intermittent?

d) What time of day is he bothered most?

2. Ask the patient to open and close his mouth.

a) Does he close it gingerly, as if it might hurt?

b) Does he favor or open laterally toward one side?

c) Does he open as if there was a hinge joint only?

d) Is he able to slide the mandible from side to side or is it locked?

e) Is there a rasping and crackling of the joint?

f) Does the head of the condyle snap over the eminentia articularis unilaterally or bilaterally?

g) When the patient closes his mouth to contact his teeth, do they first occlude and then slide under too far or slip to one side or the other? (They usually side slip toward the affected side.) (Figs. 4 and 5).

It is important here to remember that one is only trying to observe changes from the normal in each individual patient. Deep overbites, high arches, or obvious malocclusions, for instance, might be perfectly normal for a patient.

Monson Ear Test—Another significant observation can be made from this test (Fig. 3).

1. Place the little fingers in the ears of the patient as shown in the picture. Have the patient close his mouth. Notice the backward thrust of the mandible after the first contact of the teeth. If abnormal, it will cause the patient pain or discomfort, especially in the affected joint.

2. Usually the position of the condyle head, where it just begins its backward thrust, is the normal position for that patient. This test is an excellent guide in starting to reposition the mandible.

3. The jar and pressure of the backward thrust of the mandible cause irritation to and destruction of the various tissues in the nonarticular portion of the glenoid fossa (Fig. 1). The dentist's task is to relieve this traumatizing thrust, either by removing the cause or by preventing further destruction.

8. ***Lower lingual bar and upper splint in place, correcting intrusion and overbite.***

If the diagnosis is that a change from the normal has occurred, the dentist should communicate this decision to the referring otolaryngologist and to the patient, telling them that he *may* be able to correct the condition. I have used many different types of splints in repositioning mandibles during the last fifteen years and have had some successful results with each kind. Most splints required much treatment time and necessitated some adjustment of the teeth themselves.

Qualifications of a Successful Splint

The requirements for a successful temporary rest splint are:

1. Effectively does the job, freeing the occlusal lock of the teeth so there is complete freedom of jaw movement.
2. Can be discarded if not effective.
3. Does not damage teeth.
4. Easy to correct or adjust.
5. Easy to construct quickly.
6. Hygienic.
7. Comfortable.
8. Inconspicuous.

The rest splint that I have been using for the past three years more nearly meets all these requirements than anything I have tried so far. It is an adaptation of simple, known

9. ***Right: Baseplate with functional wax impression. Center: Upper splint used in case described, showing the clear plastic functional shelf. Left: Type of splint used for cases where most of posterior teeth are present. Any number of designs can be made using the functional lingual shelf according to the ingenuity of the dentist.***

methods utilized by the orthodontists, the functional occlusion enthusiasts, and the spherical occlusion converts.

Construction of Temporary Rest Splint

1. Procure accurate models made from colloid or alginate impressions.
2. Make baseplate covering palate and overlapping anterior teeth from cuspid to cuspid (Figs. 7 and 9). (Nothing covering occlusal surfaces of posterior teeth.)
3. Melt small amount of baseplate wax on anterior teeth portion of baseplate to form a biting shelf (Fig. 9).
4. Place in mouth (Fig. 6).
5. Place fingers in ears and have patient bite into wax carefully to the place where the backward thrust of the mandible begins (Fig. 6). Chill wax and have patient open and close; check for accuracy.
6. Trim wax and smooth along incisals of teeth.
7. Have patient slide teeth laterally, forward and backward, so as to give freedom in every motion.
8. Remove and process on model, in clear plastic, using half clasps (with no rests) wherever necessary for retention (Figs. 7 and 9). (Note: Be certain the technician does not disturb or polish off the functional indentations on splint in finishing.)

Use of Temporary Rest Splint

1. Place in patient's mouth and check for changes due to processing. With the aid of articulating paper, various locks and interferences can be eliminated until there is perfect freedom of movement in every position of the jaws.
2. Instruct the patient that this splint is to be worn every night and during the day when not eating.

It is our belief that most traumatic damage to the teeth and condyle region occurs at night. Grinding teeth at night (Bruxism) is a common complaint. This splint is a great help for this since a patient wearing the device simply cannot grind the posterior teeth. The even distribution of weight on the palate and the anterior teeth makes damage to them almost impossible (Fig. 9).

3. Although the patient usually remarks that the correction is comfortable, warn him that it may take several weeks before the muscles of the face and of mastication will adjust themselves to the new position. A filling in of soft tissues in the nonarticular portion of the glenoid fossa seems to occur and eventually the patient cannot retrude the mandible in such a way that the backward thrust of the mandible can be felt in the ear.
4. The patient and the splint must be checked from time to time inasmuch as the jaw will function differently as the muscles regain their normal balance after the locked bite is freed. In time the splint will need to be used only when symptoms recur. The gradual relief of the patient's complaints is gratifying to observe. If the treatment is not effective, the splint is discarded. No damage has been done to the teeth or jaws.

Conclusions

1. Dentists are now being asked by ear specialists to correct closed bites.
2. There is a need for a quickly constructed, effective diagnostic splint.
3. Diagnosis by symptoms and observation must be learned.
4. Patients must be promised nothing.
5. A rest splint can be constructed in two or three appointments.
6. A repositioning of the jaw to normal for a particular patient is the objective.
7. No two cases are alike; each must be treated individually.
8. A gradual tissue readjustment to normal occurs in time.
9. If treatment is not successful, the appliance can be discarded without much loss.
10. Former methods required too much time and caused damage to the teeth in some cases.

636 *Church Street.*

ODONTOMA: *Reports of Two Cases*

ROBERT A. ROBINSON, D.D.S., Albany

DIGEST

Odontomas are tumors classified as (1) germinated composite when two or more teeth are fused; (2) compound when made up of a large number of rudimentary tooth forms; (3) complex when the tumor bears no resemblance to tooth forms but is an amorphous calcified mass. The cementoma is another variety of odontoma. It develops subsequent to formation of the tooth with which it is associated.

The complex odontoma is an amorphous calcified tumor without any detectable arrangement of the dental tissues. It is usually composed of enamel, dentine, and cementum. The tumor grows slowly and painlessly and is often not discovered until distention of the jaw occurs or pain is produced.

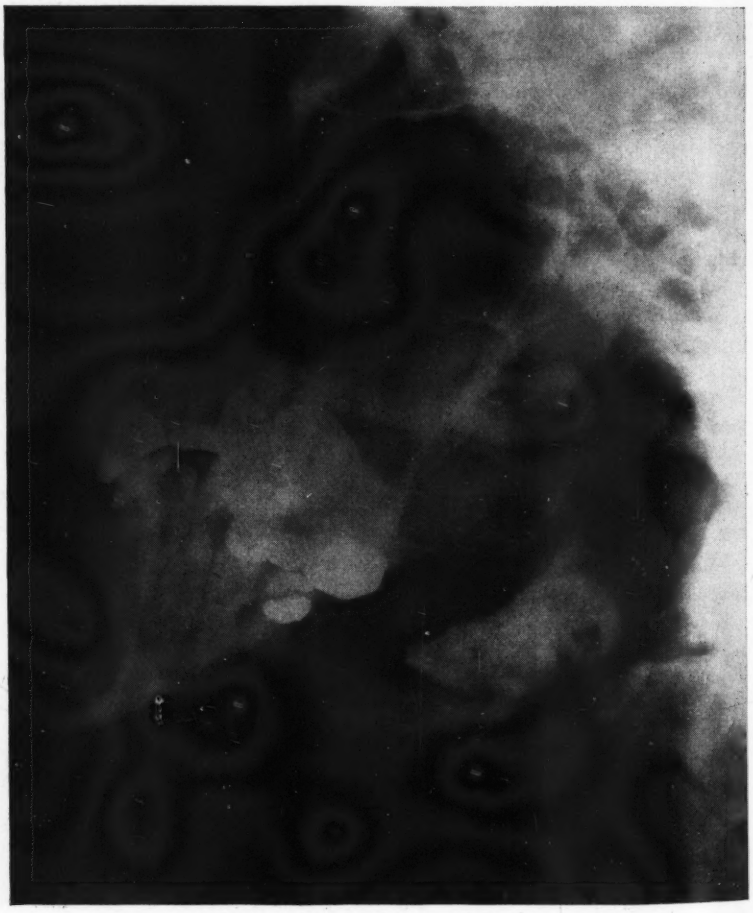
Two types of these tumors, the complex odontoma (case 2) and the cementoma (case 1), are reported here.

Case 1.

History—A patient, aged 42, consulted his dentist complaining of pain attended by swelling on the right side of his face and neck and an inability to open his mouth. Intra-oral and extra-oral thermotherapy during many days subsequently, accomplished localization. His dentist incised a swelling in the molar region and evacuated considerable pus. The patient was relieved of pain and did not seek dental care until two months later when the area became swollen again. He was then referred to this office for diagnosis and treatment.

The family history was negative

1. *Tumor in ramus.*



2. *Odontoma (cementoma) surgically removed under general anesthesia.*

3. ***Tumor in region of maxillary sinus.***

and his past history irrelevant.

Examination—Conditions present were:

1. A mild degree of trismus with moderate swelling in the submaxillary space and cheek, right side.
2. A discharging fistula in the vestibule high up on the ramus.
3. A small mass of chronically inflamed tissue extruding through the mucosa on the lingual aspect of the mandible.
4. Tissues of the third molar area injected, edematous, and tender on digital palpation.

Urine was normal, erythrocytes 3,630,000, leucocytes 6,250, hemoglobin 15 grams, color index 1.2, platelets 399,300, Wassermann reaction negative, and Kahn test negative.

The report of the roentgenographic examination read as follows: "In the posterior portion of the body of the right side of the mandible and adjacent portion of the right ramus there is a conglomerous mass of various opaque material which, in a few areas, shows a definite dental structure suggesting odontoma." (Fig. 1).

Surgical Treatment—The patient was hospitalized. Under general anesthesia surgery exposed a thin bone covering a smooth, hard calcareous mass (Fig. 2) which offered little resistance to removal. The area was debrided, closed with several sutures, and a drain inserted. The patient was discharged after two days for postoperative care by his dentist in a neighboring city. Recovery was uneventful.

Diagnosis—Cementoma.

Case 2.

History—The patient, a man aged 32, was conscious of tenderness in his upper right jaw posterior to the last tooth. At intervals there was sharp pain.

Examination—The upper right second molar and the maxilla distal to it were enlarged. The buccal mucosa in the area was normal.

The roentgenographic examination was reported as follows: "There is a radiopaque mass in the right superior

4. ***Complex odontoma after surgical removal.***

maxillary region of the antrum. Tooth forms appear to be contained in the mass." (Fig. 3).

Surgical Treatment—Under local anesthesia, surgery exposed an amorphous, lobulated calcareous mass extending into the antrum (Fig. 4). The mass was removed and the area closed with sutures. Recovery was uneventful.

Diagnosis—Complex odontoma.

100 *State Street.*

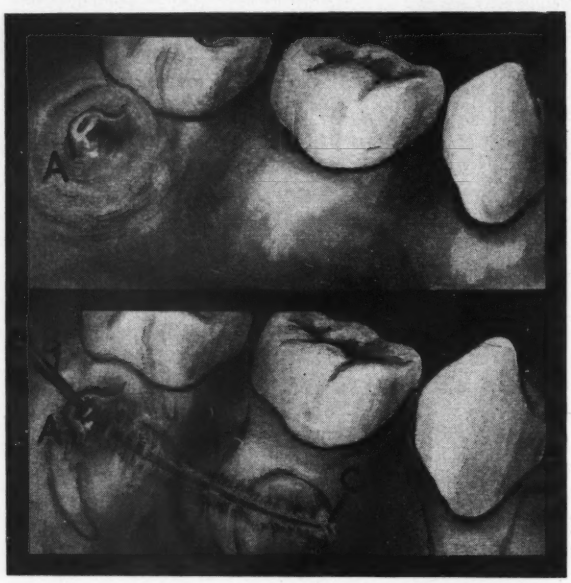
Clinical and Laborator

1

Preparing Interproximal Wedges

Louis W. Tirocchi, D.D.S., Providence, Rhode Island

Fig. 1—Effective wedges to use with a matrix in compound amalgam restorations may be made from an ordinary comb. The "teeth" of the comb may be removed from the base by cutting with a disc along the line shown in the illustration.



2

Locating an Infected Deciduous Tooth

Jerome M. Piekos, D.D.S., Chicago

Fig. 2—It is sometimes difficult to establish the exact site of an infected deciduous tooth. The area of the "gum boil" does not always indicate the diseased tooth. To check, insert a gutta percha cone into the gum boil (A), pass the cone (B) gently until it meets an obstruction (C). Take a roentgenogram of the gutta percha cone in this position. The obstruction (C) represents the root involved in the infection.

3

Making a Roentgenogram Beneath a Rubber Dam

G. C. Hare, D.D.S., Toronto

Fig. 3—In root-canal therapy, it is advisable to make a roentgenogram of the trial point while the rubber dam is in position. To do so, it is only necessary to free the rubber dam from the holder and insert a film in position, using a hemostat or artery clamp. The film is easily inserted beneath the dam and the patient can hold it steady by the handle of the hemostat while the film is being exposed.

READERS *are Urged to Collect* $10.00

For every practical clinical or laboratory suggestion that is usable, DENTAL DIGEST will pay $10.00 on publication.

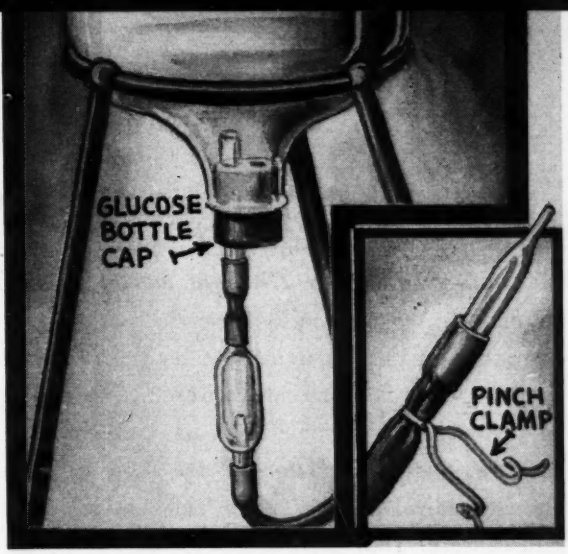
You do not have to write an article. Furnish us with rough drawings or sketches, from which we will make suitable illustrations; write a brief description of the

UGGESTIONS . . .

A Constant Supply of Room Temperature Water

H. G. Barrer, D.D.S., Reading, Pennsylvania

Fig. 4—Water for mixing an inlay investment is best used at room temperature. A simple supply bottle may be made by utilizing a bottle with an air trap stopper such as is used on bottles of glucose, saline, and blood plasma. These discarded bottles and stoppers may be had from any hospital.

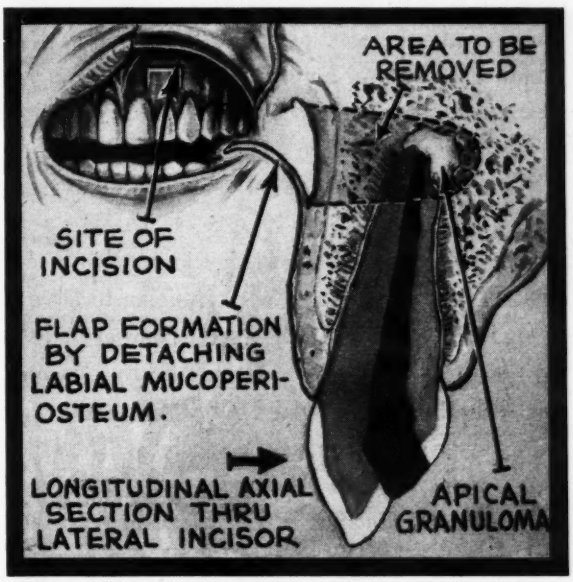


4

Flap Formation in Root Resection

Peter Adler, D.D.S., Debrecen, Hungary

Fig. 5—In root resection it seems advantageous to form a rectangular mucoperiosteal flap with the attached portion toward the gum crest. The advantages of this procedure are: a) natural retraction of the flap by gravity; b) good view of the operative field.

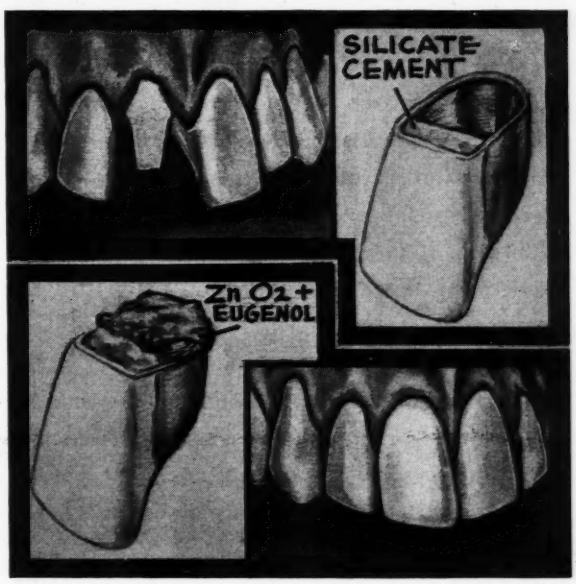

AREA TO BE REMOVED
SITE OF INCISION
FLAP FORMATION BY DETACHING LABIAL MUCOPERI-OSTEUM.
LONGITUDINAL AXIAL SECTION THRU LATERAL INCISOR
APICAL GRANULOMA

5

Transitional Celluloid Crown

Lieutenant (jg) Dale P. DeVore (DC) USN, Fort McPherson, Ga.

Fig. 6—After a tooth is prepared for a porcelain jacket crown, it is important to protect the prepared tooth from irritation. A celluloid crown form is selected and contoured and the labial portion is filled with the proper shade of silicate cement. After the silicate has hardened, the remaining portion of the crown form is filled with a mixture of zinc oxide and eugenol. The resulting transitional celluloid crown assures esthetics and is more simply removed than one where the entire crown form has been filled with silicate. Zinc oxide-eugenol cement also acts as a sedative protection to the prepared tooth.



6

technique involved; and jot down the advantages of the technique. This shouldn't take ten minutes of your time.

Turn to page 192 for a convenient form to use.

Send your ideas to: Clinical and Laboratory Suggestions Editor, DENTAL DIGEST, 708 Church Street, Evanston, Illinois.

The EDITOR'S *Page*

IN A POLL conducted in Wisconsin among medical officers released from military service only 10 per cent indicated their intention to enter general practice; the other 90 per cent expressed their expectation to engage in some form of specialization. Many serious commentators on the subject of the present medical practice system view this situation with concern. They feel, and properly so, that in time the general practitioner will be a rarity, and consequently the sick person will be required to submit himself to a number of physicians for the treatment of the simplest condition. Such a situation is one that will produce confusion and divison of responsibility and be prohibitive in cost to the average patient.

With the expanded knowledge in modern medicine it is difficult for any one physician to act expertly in many fields. The fact is, however, that most medical problems can be handled by a competent general practitioner and only the unusual conditions require the service of a specialist. The same tendency toward specialization is beginning to show itself in dental practice. A few years ago the orthodontist and the oral surgeon were the only recognized specialists. In fact, it is only now that the oral surgeons have established a Specialty Board to accredit practitioners in that branch of dentistry. At the present time we have no organization comparable to the American College of Surgeons or the American College of Physicians that requires evidence of specialized knowledge to be eligible for fellowship. Neither of the "Colleges" in dentistry requires any kind of examination to qualify for membership.

There is a marked geographic imbalance in the distribution of dental practitioners. The smaller communities and the states with the lowest per capita incomes have fewer dentists in proportion to the population than do the urban centers. In the less populated areas the dentist is still required to be in general practice if he expects to survive. He must be his own oral surgeon and orthodontist as well as practice in the other fields of dentistry. If he becomes weary of this toil or if he has ambitions to engage in limited practice he moves to a larger community, and usually no other dentist takes his place in the smaller community.

A recent medical publication, AN INTEGRATED PRACTICE OF MEDICINE, by Harold T. Hyman (W. B. Saunders, publishers) is significant because it is directed to the needs of the general practitioner and not to any specialized group. This four-volume book with a separate index volume covers the entire area of medical practice. It has been the ambition of Doctor Hyman and his co-writers to present modern medical knowledge in a form that will give the general practitioner confidence of his competency in many fields. It is time that someone undertook a similar task to correlate and integrate the fields of dental knowledge and break down some of the false standards of segmentation and specialization toward which we are moving. The backbone of dental practice is the general practitioner. We must do everything possible to give him the knowledge with which to do his job better.

No one dentist has the ability to write as an expert in all the fields of dentistry. There are men in the profession, notably among the dental teachers, who could arrange, coordinate, and edit a publication on integrated dental practice. Most of our books in recent years have been written on thin segments of dental knowledge. It is time that someone undertook an assignment, similar to the work done years ago by Kirk and Anthony, to put in a single publication the best of all current dental knowledge directed toward the requirements of the general practitioner.

MEDICINE

Rheumatic Fever

Doctor Herman H. Riecker states some pertinent facts about rheumatic fever in the December issue of the *American Practitioner*. Rheumatic fever is predominantly a disease of childhood and early adult life. The incidence is higher in girls.

The disease is a definite infection. It is well established that the upper respiratory tract is the portal of entry. Therefore, the disease is more common in the early spring when upper respiratory infections are prevalent.

It should be looked on as a contagious disease and preventive measures should be similar to those for tuberculosis. A person who has had rheumatic fever is always susceptible to later attacks. Therefore, the rheumatic person should be protected as much as possible.

There is a familial incidence manifesting itself in both a tissue susceptibility and a contagious factor. It is wise for susceptible families to move to southern climates to avoid dampness and chilling.

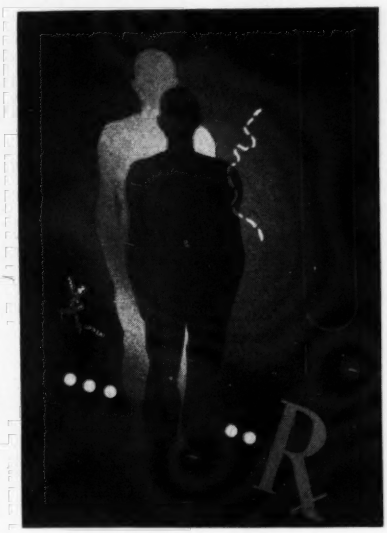
If tonsillectomy is indicated because of disease of the tonsils, it should be performed; however, it is not indicated otherwise. Tonsillectomy does not affect favorably the course of the disease and may even precipitate an attack.

It is best to keep the patient in bed during the time of any respiratory infection. And finally, the food intake should ensure adequate vitamins and minerals and the avoidance of overweight and underweight.

Riecker, H. H.: Rheumatic Fever, Preventive Aspects, Am. Practitioner 1:203-206 (*December*) 1946.

Multiple Human Births (Biology)

Complete statistics reveal that twins occur once in 87 births; triplets once in 7,000 births; and quadruplets once in 550,000 births. That extraordinary rarity, quintuplets, is noted only once in 57,000,000 births.



and the Biologic Sciences

Because the occurrence of twins is relatively common biologists have studied them a great deal. The principles found apply not only to twins but to all the other multiple births.

There are two types of twins: unidentical or fraternal and identical or duplicate. Unidentical twins are as different as any two children in the same family. Identical twins, however, are of the same sex and practically the same in all physical and mental characteristics.

If, at the time of conception, two separate eggs are fertilized, fraternal twins are produced. This accounts for the difference in fraternal twins. They may be of opposite sex and marked differences in physical and mental traits are commonly noted.

When a single egg or zygote is split into two approximately equal portions early in development, identical twins are produced. If by chance the separation is incomplete a monstrosity occurs. The separation must be such that there are two equal portions which contain the same combination of chromosomes endowed with similar traits. And as a result in the majority of cases identical twins are just that—virtually identical. They are of the same sex and have the same physical and mental traits. Even their blood types and fingerprints are alike.

The occurrence of twins has given the biologists an excellent opportunity to ascertain the roles played by heredity and environment. Identical twins are fine material for such studies. Identical twins in the same environment show remarkable similarities in all phases of growth and development. One interesting conclusion is the fact that crime is due to circumstances other than hereditary ones.

It has been definitely shown that in cases where identical twins have been subjected to different environmental conditions after birth, modifications will assert themselves. Environment can act only on the genes present in the individual. As a rule the environmental factors have a definite influence on mental and intellectual traits, whereas, physical characteristics remain the same.

Fasten, Nathan: Multiple Human Births, Hygeia 24:756-757 (*October*) 1946.

Physiology - Proteins

A fact that is being realized more than ever today as a result of the widespread hunger in the countries ravaged by war is the absolute necessity for proteins in the diet. In either the healthy or starving man the quantity and quality of proteins are among the most vital factors in proper nutrition. Without an adequate supply of proteins no amount of fats, carbohydrates, vitamins, and minerals will keep man alive for an appreciable length of time.

The importance of this dietary principle to the dentist lies in its relationship to the sugar intake. It is well established today that an excess of sugars in the diet is a predisposing factor in causing caries. This is especially true in children.

A diet inadequate in protein will often create a craving for quick energy foods like candies and sweets. Properly fed children do not crave these. It is better for the dental mechanism as well as the entire body to assure balanced diets with a certainty that proteins foods are adequate.

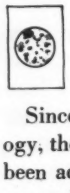
Just why are proteins so important? They are present in all animal and vegetable cells and constitute the essential part of the living protoplasm. In no two tissues are the proteins exactly alike. Indeed, they seem to have the ability to confer biologic specificity on tissues.

The prime task of proteins is to build the body tissue. Plants and bacteria synthetize their own, but man and the higher animals have lost this ability and must rely on the proteins in various foods to carry on bodily processes.

Proteins are made up of amino acids. Twenty-two have been identified to date. Nutritional research has shown that eight of the amino acids are needed by man. The amino acids as newly formed proteins in the body have an important function in the resistance to disease. It has been noted that persons suffering from malnutrition or undernutrition tend to acquire severe tuberculosis, rheumatic disease, and respiratory and enteric infections.

Animal proteins are more complete than those derived from vegetable sources. Meat, fish, poultry, and dairy products are superior in nutritional efficiency to cereals, wheat, corn, oats, and vegetables. However, small amounts of animal proteins will greatly enhance the values of grains and legumes. Therefore, diets should consist of a variety of foods to ensure adequate amounts of amino acids.

Anderson, W. L.: Wanted: More Protein, Hygeia 25:18-19 (*January*) 1947.



Focal Infection

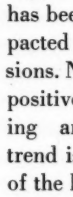
Since the modern era of bacteriology, the concept of focal infection has been accepted as an established process and not just a theory. Focal infection is of interest to the dentist because the teeth and supporting structures have played a prominent role as apparent causative agents of many infections throughout the body.

Today it is generally recognized as a good procedure to find and remove local and often symptomless infection. However, the removal of large numbers of teeth or operations on the nose and throat on the chance of there being a possible relationship between infections and chronic arthritis is not considered scientific procedure.

It is obviously difficult to determine the exact nature of the relationship of a focus of infection to chronic arthritis. An infection from a tooth can more easily be traced to the heart or kidney.

Careful study and observation have aided in establishing improved methods of diagnosis and treatment. Therefore, to serve patients better dentally and medically, more careful examination is necessary.

Irons, E. E.: The Theory of Focal Infection: Its Influence on the Practice of Medicine, Proc. Inst. M. Chicago, 16:265 (*December* 15) 1946.



Anthropology Evolutionary Trends

For a long time many patients have been told that their teeth are too large for the jaw structures which support their teeth. This statement has been an easy "out" to explain impacted third molars and malocclusions. Now, Doctor Earnest A. Hooton positively maintains that a long-standing and deep-rooted evolutionary trend is present toward the reduction of the bony structure of the face. And along with this is a decrease in the size of the dental arches as well as the teeth themselves.

This evolutionary trend is well established in the white race. Also, there is evidence that it may exist in the Mongoloid and Negroid races.

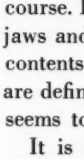
In the various racial types there are different ways in which the end results are noted. Impacted molars are more apt to occur in the broad-faced, short-faced, round-headed peoples because of lack of posterior development in the jaws. However, in the long-faced, narrow-faced, long-headed peoples, malocclusions are found because of insufficient width of the palate and mandible and defective or limited mandibular development.

In the functional atrophy and shrinkage of an organ, whether due to hereditary or environmental causes, the different parts of that organ are probably affected in the order of their comparative plasticity. Thus, in the masticatory apparatus the muscles are first decreased, then the bone and finally the teeth. This probably explains the fact that the jaws are not large enough for the teeth to erupt in their proper positions.

Man appears to be an animal that has entered upon a terminal and decidedly retrogressive evolutionary course. Evidence shows that the teeth, jaws and face, the brain case and its contents as well as other bony parts are definitely affected. Even the brain seems to be shrinking.

It is wise for the dentist to keep these facts in mind when considering preventive and restorative work. He should not attempt to reconstruct mouths without a recognition of the factors that make for physiologic stability.

Hooton, Earnest A.: The Evolution and Devolution of the Human Face, Am. J. Orthodont. & Oral Surg. 32:657-672 (*December*) 1946.



Hemorrhage Control

A product developed for neurosurgical work is being used in oral surgery with a high degree of success. Gelfoam, an absorbable gelatin sponge soaked with beef thrombin, serves as an effective hemostatic. It has the advantage of being compatible with human tissue as well as absorbable.

Normal bleeding and the resultant formation of a blood clot are to be desired in oral surgery. It is well known that rapid clotting helps to prevent infection through an open socket. And, too, rapid clotting is the initial factor in the process of repair and healing. Therefore, an absorbable

material which is an aid to hemostasis as well as to the acceleration of healing is certainly desirable in oral surgery.

Drains, dressings, and wicks have been used but these often retard healing and necessitate increased postoperative care. These can be largely eliminated by the use of Gelfoam soaked in beef thrombin. Doctor Walter Guralnick of Boston reports several interesting cases where Gelfoam was used with excellent results. The maxillary sinus was opened in one case by the extraction of an upper six year molar, the lingual root of which extended into the maxillary sinus. Gelfoam in this case prevented complications of any sort.

The procedure for using Gelfoam is simple. The dry sponge is cut to the desired size and immersed in the thrombin solution. Thrombin solution is prepared by adding saline to the powdered material. The sponge is squeezed and resoaked until it returns to original size. Excess fluid is blotted off the sponge by placing on a dry sponge of cotton. Upon insertion into the wound the sponge fills quickly with blood, thereby becoming adherent. This usually completes the procedure with little other postoperative care necessary.

Guralnick, W. C.: Absorbable Gelatin Sponge and Thrombin in Oral Surgery, Am. J. Orthodont. & Oral Surgery 32:792-794 (*December*) 1946.

Vitamin Deficiency in Children

In America the vitamin deficiency diseases occurring with any frequency are rickets, tetany, and scurvy. Rickets and tetany due to an inadequate amount of sunlight or vitamin D have been reduced sharply in the past twenty years. This is true largely because of the use of vitamin preparations.

In fact, rickets is more of a climatic than a dietary deficiency. It is included among nutritional deficiency diseases because of the fact that certain dietary substances can serve as a substitute.

Another factor contributing to rickets is a rapid growth rate. Rapidly growing children are more susceptible to vitamin deficiency than children who grow slowly. The breast-fed child is less susceptible than the bottle-fed child despite the absence of appreciable amounts of D in breast milk. Dark-skinned children are more susceptible because the skin pigmentation interferes with the absorption of the rays of the sun. Premature infants are exceptionally susceptible to D deficiency. Also, it is noted that the syphilitic child tends to develop D deficiency earlier than the nonsyphilitic.

In the child rickets may result in bow legs, knock-knees, and changes in the chest configuration and in other bones. Unless severe, rickets does not interfere with general health.

When doubt exists as to the presence of rickets, an x-ray examination will confirm its presence. Characteristic changes are seen in the distal extremities of the radius and ulna. These end bones are flared, cupped, and frayed.

Bakwin, Harry: Vitamin Deficiency Diseases in Infants, Am. Practitioner 1:113-117 (*November*) 1946.

Control of Tuberculosis

On the basis of discharge examinations it is estimated that the incidence of tuberculosis in the Armed Forces of the United States in World War II was only about one tenth of that in World War I. In the last fifty years the death rate from tuberculosis has dropped some 85 per cent.

Two of the factors contributing to the drop in the death rate are the virtual elimination of tuberculosis from dairy herds and the pasteurization of milk. Such controls have no effect on the only way that the bacilli can still be spread. This way is by contact with human bacilli from persons having recognized or unrecognized open lesions.

Today, only the open case is the principal source of infection. Statistics show that each case is giving rise to less than one new case. Therefore, if this decline can be maintained the ultimate eradication of tuberculosis is a definite possibility.

Efforts are being concentrated on the open case. And to do this means early diagnosis, prompt hospitalization of active cases, and routine x-ray examinations of all family contacts, especially adults. It is possible to trace only approximately one half of the new cases to direct contacts. Consequently, greater care must be exerted to find all cases.

It is possible to examine mass groups efficiently by methods developed recently in the field of photofluorography. Under Selective Service nearly 20,000,000 young men and women were screened with x-ray films of the chest.

Facilities for mass x-ray examinations are becoming available on a wider scale. Use of these facilities and patient education will go far toward the ultimate eradication of tuberculosis.

Editorial: Control of Tuberculosis, New England J. Med. 236:152-153 (*January* 23) 1947.

War Injuries (Psychology)

An interesting development noted from the treatment of war injuries is the psychologic relationship of the patient to such injuries. In many cases the injuries and deformities are so prominent that the professional attendants direct all their attention and energies toward these and as a result the factor of mental hygiene is neglected. Overemphasis of the physical factor may introduce morbid psychologic factors.

It is necessary in dealing with these patients to offer something constructive to compensate for physical handicaps. Not only do many of the cases resulting in physical handicaps require the services of the orthopedic surgeon but also of the neuropsychiatrist.

Of particular interest are those patients who have lost limbs. With improper adjustment the loss of a limb can set up a consequent mental illness. The phantom limb exists more

commonly than one would believe. Some persons imagine all sorts of sensations and pains in lost limbs.

Expert and understanding guidance is needed when replacements are introduced. This adjustment requires time and a favorable environment. Usually the younger the patient the better the adjustment. The previous personality of the patient is an important factor in the psychologic attitude toward an injury. Neurotic traits previously evidenced will tend to produce abnormal reactions.

In the mental hospitals there are cases of only mild injuries accompanied by abnormal psychologic reactions. These patients often perpetuate unconsciously symptoms of an affliction for which there is no organic basis at all.

Therefore, it is wise to keep in mind that these same conditions may be present in persons not troubled with injuries and deformities. The afflictions may be minor but in their minds and bodies unconscious symptoms may be set up. And as a result their behavior is guided accordingly.

Doherty, W. B., and Runes, D. D.: Rehabilitation of War Injured, New York Philosophical Library, Inc., 1943, *pages* 115-122.

Stomach Acidity

It is common for people who suffer discomfort in the stomach region to attribute their trouble to "acid stomach." This conception is largely false as it has been shown that the stomach acidity not only protects the body from dangerous bacteria but also provides the acid medium necessary for protein digestion by the pepsin.

After a meal the stomach is very acid, containing about 0.2 per cent of hydrochloric acid. A meal composed chiefly of carbohydrates will result in the formation of less acid than a meal of proteins in substantial quantity. Rich fatty foods remain in the stomach for a longer period of time than simple foods.

The function of the stomach is an extremely delicate one. The wrong foods, medicines, and even emotions can easily disturb proper stomach function. A disturbance will cause the food to remain in the stomach too long. This is the most common cause of stomach pains and various unpleasant sensations in the gastric region.

Studies have revealed that the acidity of the stomach is protective. The stomach acidity tends to decrease in poor health and lowered vitality. It has been stated that nearly half the population over fifty is losing or has already lost stomach acidity. It may even be asserted that stomach acidity is an indication of youthful vitality.

Scientists at the Mayo Clinic emphasize the fact that the life span of a person with nonacid stomach is shorter than average. A strongly acid gastric juice predisposes to a longer life. Aside from the digestive factor acidity is needed as a defense against bacteria. A low acid or nonacid stomach allows easy entry to bacteria, whereas, in a high acid stomach bacteria are killed in a few minutes.

What is hyperacidity? About five per cent of the adult population suffer from this. The difference between the hyperacid stomach and the normal stomach is quantitative rather than qualitative. There is an increased amount of juice or the evacuation of food is delayed resulting in a continuous secretion of gastric juice.

Medical practice is changing with regard to the administration of alkaline preparations to reduce acidity. Constant and artificial neutralizing of gastric acidity disturbs the complicated function of the stomach and will eventually allow the bacteria an entry to the intestine. In fact, the body reacts to alkaline preparations by raising gastric acidity even higher. It is better to institute special diets, decrease the size of meals, or drink some acid beverage before meals.

Sokoloff, Boris: The Civilized Diseases, New York, Howell-Soskin, 1944, *pages* 43-53.

Chronic Sinusitis

Many persons complain of being afflicted with a chronic sinusitis. Most of what is termed chronic sinusitis, however, is not a chronic infection at all but a subacute infection prolonged because the membranes react allergically.

In dealing with the symptoms of chronic sinusitis, the history and physical examination of the patient are important for the purpose of uncovering any glandular dyscrasias as these tend to produce disturbances of the mucous membrane. And, too, some dietary deficiencies as, for instance, of vitamins and minerals, or the inability to handle certain foods may cause a reflex upset in the nasal tissues. Certain habits, particularly late hours, alcohol, smoking, excessive eating, and worry can easily lower bodily resistance, thus paving the way for secondary infection of the sinuses.

The elimination of the factor of allergy is a "must." Overuse of nasal medication should be avoided as it has been noted that many medicaments have an irritating effect on the mucous membrane.

Nose drops have no place in the treatment of any chronic nasal condition whether it be a true chronic infection of the sinuses or one of the allergic states. Any transient results which may be obtained are in the long run far outweighed by the adverse secondary effects.

In children the treatment of chronic sinusitis is usually nonsurgical. Infected tonsils and adenoids should be removed if they are responsible for maintaining an infection which affects the sinuses.

The use of sulfonamide compounds and of penicillin is of questionable value for the chronic infection; however, they may be clearly indicated in the acute exacerbation of the infection. Vaccines and x-ray treatment are not of great value in treatment.

The dentist is particularly interested in the maxillary sinus. A maxillary sinusitis of dental origin which has foul pus usually requires the removal of the lining of the sinus. The infection may be cleared up by irrigations but with a new cold the formation of foul pus occurs again. Infected bone at the site of an old apical abscess apparently keeps up the infection on the lining membrane.

A Jacket Crown! Nowhere does precise, proper preparation have a more vital bearing on the ultimate success of a restoration—and nowhere is truly adequate anesthesia more essential to just that. That's why you find such a vast number of dentists who, when they think of jacket crowns, think immediately of Novocain-Pontocaine-Cobefrin . . . knowing from practical experience that the **deep, dense, enduring** character of its anesthesia, unlike that of so many other solutions, gives unhampered freedom to their operative skill. They also know, of course, that **all** of these important advantages are theirs without either an increase in vasoconstrictor content or a perceptible decrease in patient toleration.

Apply these tangible advantages to all your difficult-to-anesthetize operative work . . . and let "the difference that's distinctive" perform its distinctive service for you.

here again you'll appreciate

"The difference that's distinctive"

npc

DEEP Anesthesia, LONG LASTING Anesthesia WITHOUT ADDED VASOCONSTRICTOR

Novocain-Pontocaine-Cobefrin

COOK-WAITE *Laboratories, Inc.*

Cook-Waite Laboratories, Inc., 170 Varick Street, New York 13, N.Y.

Cobefrin, Novocain, Pontocaine Reg. Trademarks Winthrop Chemical Co., Inc.

CLINICAL AND LABORATORY SUGGESTIONS

(*See pages* 184 *and* 185)

Form to be Used by Contributors

To: Clinical and Laboratory Suggestions Editor
DENTAL DIGEST
708 Church Street
Evanston, Illinois

From:_____

_____

Subject:_____

Explanation of Procedure:

Sketch:

$10 will be paid to author on publication of accepted suggestions.

Therefore, curetting out the infected bone and closing the fistula are necessary.

Today nonsurgical treatment is more inclusive and consequently surgery is not necessary as frequently as in the past. The mucous membranes of the sinuses have remarkable recuperative powers which make possible less drastic measures in treatment.

Hunnicutt, Leland G.: Modern Treatment of Chronic Sinusitis, J.A.M.A. 133:84-86 (*January* 11) 1947.

Contra-Angles

Dentists Aren't Patients—Often

After a buffeting of three or four days at a dental meeting, it appears that dentists aren't too familiar themselves with the services available from their colleagues. Among dentists at meetings there is an abundance of observable open spaces; a large share of dental caries not under treatment; some obvious calculus and stain of long duration, and an appalling number of ill-conceived and poorly executed dental appliances.

An inquiring friend of mine, a dentist, recently suggested that at some dental meeting every dentist who registered be required to present himself for a full mouth roentgenographic examination and a clinical examination. He felt that if dentists had this opportunity for examination, they might at some time or other present themselves to some colleague for treatment. I am not this naive, however. I suspect that most dentists would fear to expose themselves to dental examination. Most of them would be embarrassed to have their colleagues see the amount of untreated diseases present and the poor quality of most of the restorations.

(*Continued on page* 197)

(*Continued from page* 192)

I have never been able to understand how a dentist who himself is weeping for dental care can stand before a patient and present in glowing terms the glorious story of dental health. In fact, I know a famous prosthodontist who wears clicking, clattering dentures that look almost like something mail order houses put out. I know an authority on periodontics who has salivary calculus on the *labial* of his lower anterior teeth; and I know a fervent apostle of early dental attention and an effective talker on operative dentistry who has frank clinical caries on the proximal surfaces of his upper anterior teeth.

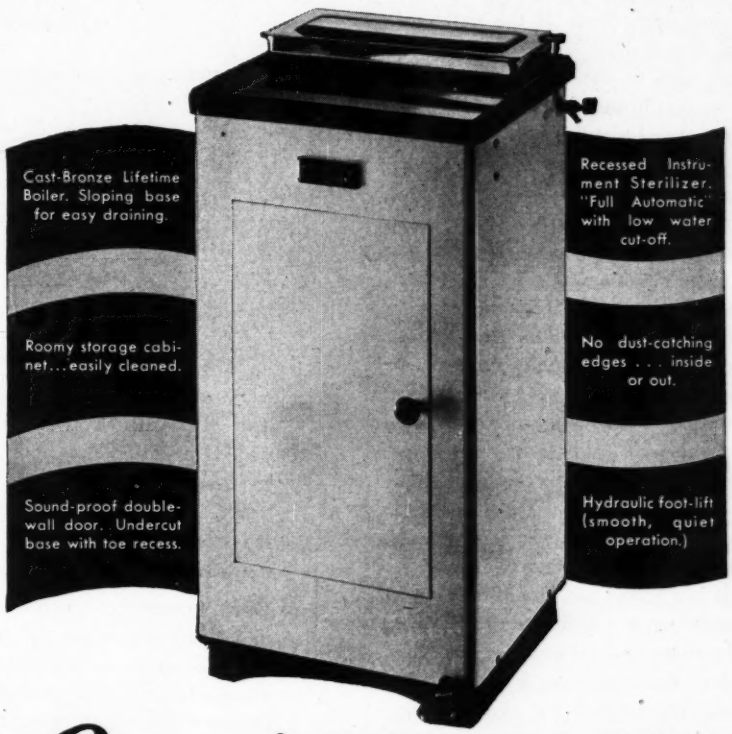
Dentists are no different from other people in the sense that they were born with better teeth or more resistance to disease. Dentists have just as much dental disease as any other group in the population and probably more of it is untreated than in most groups. It is hardly excusable, however, for dentists to go without attention. They rationalize, of course, that they haven't the time. So, too, do many other people rationalize; but we have short patience with them.

If dentists would put themselves in the position of any other patient, they might get better dental attention. That would mean that they would present themselves at regular intervals, keep their mouths shut regarding procedures, let the dentist who was operating proceed in his own sweet way, and finally pay their bills. Free service between professional people is bad. One trouble with such a service is that somebody always gets gypped. One person in the transaction always requires much more care than the other. The only way for a dentist to get proper attention is to pay for it, not excessively to be sure, but pay enough so that the operator at least can meet his overhead expenses.

I thought this poor quality of dental attention among dentists was probably something unique in our profession. The other day, however, I had a visit with several physician friends of mine. They were quite

Dentists prefer the "90" STERILIZER . . .

The Castle Sterilizer has all the features you want in an office sterilizer . . . and there is a Castle Sterilizer to solve your particular sterilizing problem . . . to bring new safety and efficiency into your office. For full details write: Wilmot Castle Co., 1109 University Ave., Rochester 7, N. Y.


Cast-Bronze Lifetime Boiler. Sloping base for easy draining.
Roomy storage cabinet...easily cleaned.
Sound-proof double-wall door. Undercut base with toe recess.
Recessed Instrument Sterilizer. "Full Automatic" with low water cut-off.
No dust-catching edges . . . inside or out.
Hydraulic foot-lift (smooth, quiet operation.)

Castle LIGHTS AND STERILIZERS

MU-COL—*Valuable for Many Dental Uses*

Mu-col

THE MU-COL CO.
Dept. DD-47
Buffalo 3, N. Y.

MU-COL, a trustworthy bacteriostatic and detergent, is professionally recommended for (1) the mouth wash at the chair, where its cooling and soothing properties are a special comfort to the patient; (2) in post-extraction treatment; (3) as a cleanser for dentures; (4) as a general mouth wash to promote hygiene and sweet mouth breath. Samples sent on request.

vehement in stating that the physician and his family received the poorest kind of medical care and were often given the run-around. One physician in the crowd, an internationally known neurosurgeon, told a story of his own experience. He said that his wife had developed severe shingles. For months the woman went without enough sleep and was greatly distressed every hour of the day. She was beaten back and forth, passed from one to the other among the physicians of the community. Finally, the husband took his wife to a far-off city, selected a dermatologist at random, and presented himself and his wife for treatment. He did not reveal his identity to the dermatologist; in fact, he masqueraded as a salesman. The treatment for the shingles was prompt and swift and the results were sure. After six injections of something or other, the wife was entirely cured. The husband, the neurosurgeon, doesn't know to this day what was used nor does the physician who treated the case know the identity of his distinguished colleague who masqueraded as a salesman.

It is a rather sad situation when a dentist or a physician has to use subterfuge and an assumed name in order to get the right kind of attention. This reminds me of something I saw the other day in a medical magazine: "If he still has his appendix and his tonsils, ten to one he is a doctor." I could paraphrase this to say: "If he has no evidence of dental care, he must be a dentist."

Not a Prolix Gut to be Stuffed

I may be quoting Mr. Woodrow Wilson wrong, but it seems to me he once said that education wasn't something you stuffed down somebody's gut. In fact, education is something you have to work for. I have just seen a hard-hitting piece of writing on this subject. An editorial in the *Bulletin of the St. Louis Dental Society*[1] by Doctor Ralph Rosen discusses dental society programs. Here is what Doctor Rosen says: "Our scientific programs have grown in numbers and improved in quality and yet, perhaps, that is the weakest spot in our program. The primary purpose of meeting for a scientific session is the exchange of ideas and not the silent acceptance or rejection of an essayist's thesis. Time is limited and audiences are large. Thus, general discussion of a paper is not feasible, some may say. Yet, this very discussion is the most valuable part of the 'exchange of ideas.'

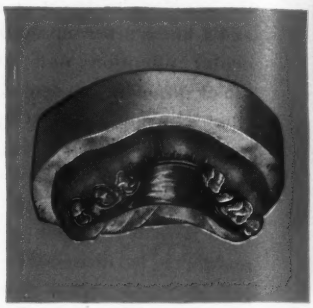
"Ideas, new or old, must be challenged. They must stand the test of logical scrutiny. Thus fertilized, they can take root and grow into hardy practice . . .

"One cannot acquire by absorption technique or theory while comfortably seated in an air-conditioned meeting room. We would abolish the form-

[1]Rosen, Ralph: Editorial, Bulletin of the St. Louis Dental Society **18**:14-15 (February) 1947.

* . . . CHILD PATIENT, AGE 14

This unfortunate youngster was born with a cleft palate. Earlier attempts to provide a workable restoration had failed because of excessive bulkiness, lack of balance and insufficient retention. Design of a successful appliance to restore some degree of normality in appearance,



This was an especially difficult design problem because the teeth are small, widely spaced on the right, and tilted abnormally. Conventional clasping conditions are noticeable by their absence. To get the necessary bracing and retention, full advantage had to be taken of every undercut and retentive area. Furthermore, besides fulfilling its other functions, the restoration must also serve as a space maintainer.

Other interesting features are the way in which the case is constructed to support and retain the anterior attachment and artificial teeth superimposed on the existing anterior teeth to correct a marked prognathism. On the tissue side of the casting, retention and a finish line are provided for the acrylic attachment needed to close the nasal cavity.

The gold casting was made in NEY-ORO G-3 and weighed only 9 dwt. before the acrylic attachments and teeth were added. The success of a case such as this is dependent to an unusual degree on the exceptional casting accuracy and fit obtainable only with gold.

Twelve Similar case histories are available in a new edition of "Building a Successful Partial Denture." Write for your copy.

* Number Seventeen of a Series

PUBLISHED BY THE J. M. NEY

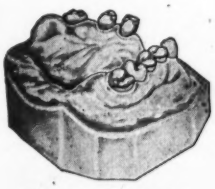
AS A PART OF NEY

comfort and occlusion depends entirely on a positive solution to these problems. The child is now wearing her Ney Surveyor System designed gold partial with unusual pride. It seems light and comfortable to her because it has good balance, excellent adaptation and secure retention.

FOUR VIEWS OF MODEL SHOWING SURVEY LINES

MESIAL

DISTAL



LEFT BUCCAL

RIGHT BUCCAL

COMPANY, HARTFORD 1, CONN.
TECHNICAL SERVICE

NEY GOLD

al lectures and demonstrations of the instructor if we would develop a true study club. The proper function of the study club instructor might be to assign subjects or projects for investigation and development, coordinate and direct the students' efforts to achieve the desired goal."

Anyone who has observed dentists attending a meeting must know that the average listener comes to be entertained and to receive predigested information in easy doses. He doesn't want to exert himself to learn. Most people in an audience, for that matter, do not even take notes. Very few of them do any further study on the subject after the meeting and few participate in the discussions.

There are more than 70,000 dentists in the country and probably no more than 2,000 of them are active in investigation, teaching, writing, research, or speaking. These 2,000 men make all the contributions to dental progress. The other 68,000 sit back to have their minds stuffed by the 2,000. We would like to see more dentists carrying on investigations, writing for the periodical literature, giving clinics, appearing on dental programs. Dental meetings are pretty much the same old names and the same old faces and, unfortunately, handing out the same old stuff. We need youth and new talent if dental society programs are to be improved. We must be prepared to make it worth the lecturer's while to appear. That does not mean altogether a more generous honorarium; it means that the attendance at the meeting must be greater than it now is, the enthusiasm must be fired up, and the discussion enlivened.

Farming for Profit . . .

With the winds whirling around outside, I sit comfortably before the fire vicariously farming. I have before me a new book FARMING FOR PROFIT, (Charles C. Thomas, publisher). It is a down-to-earth story written for anybody who thinks that he would like to try his luck at making a living from the soil. It isn't a book of agricultural philosophy or high-falutin writing. It is of-the-earth stuff: What to do after you cut a sheep's tail; how to plant the corn and destroy the choking weeds; what to do when the hogs begin to farrow. Anybody who loves the smell of the rich black earth will get great pleasure from this book by H. H. Herndon.

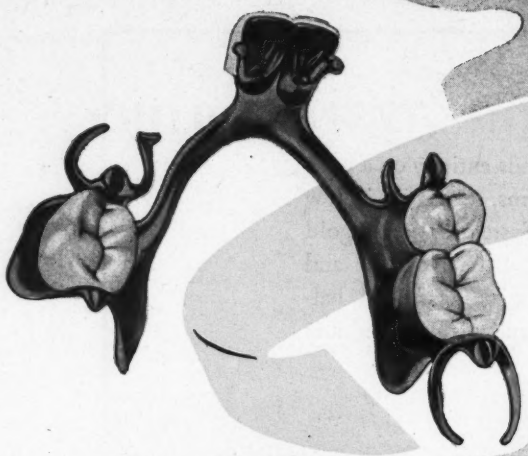
Anyone who thinks there is nothing more to farming than buying some seeds and plowing the ground may expect a surprise when he reads this book. Farming is laborious. It requires planning and an adventurous spirit and grueling work. I meet city slickers every once in a while who think that if they can buy a farm their troubles are over. They somehow think that nothing need be done except plant the seed, make the harvest, and ring up the cash register. Anyone who has faced the floods and drought, the pestilences, will know that there is much more to farming than this.

The book, FARMING FOR PROFIT, is a practical guide to the beginner and to the experienced husbandman. It is also a manual of warning to the starry-eyed hopefuls who look to farming as an easy way of living. I am a farmer of sorts, myself. I feel, like Horace, "How gladly I return to my woodlands and my little farm that restoreth me to myself." Every day when I drive into my own woodland and see my own fruit trees and my own growing things, I feel like Horace must have felt. But having this feeling has not made me want to go out and buy up extensive acreages, fancy and expensive farm machinery, and great herds of cattle. That is for somebody who likes to work, better than I.

This writing about farming reminds me about a grand organization that I belong to here in Chicago, The Chicago Farmers. This is made up of a group of men earning their livelihood in the cities but having their hearts in the countryside. This organization is made up of men ranging from the modest farm owner like myself, with a few acres, to the agrarian tycoons with hundreds of thousands of acres. But the spirit of the association is such that whether you own five acres or 50,000, you are accepted as a man of the earth. I have never seen an organization that is quite so democratic.

Language Is What You Make It . . .

That good publication, *Editor and Publisher*, the trade journal of journalists, exhorts its readers to watch for two simple things in writing: One, be aware of the fog quotient; two, write in barefooted language. This Anglo-Saxon kind of warning appeals to me. Too much speaking, too much writing is enveloped in fog—dense, impenetrable fog. Too much language is stilted and unreal. Barefoot language is the sort of direct Anglo-Saxon language you expect from barefooted boys. It is Huckleberry Finn, Tom Sawyer language. We should all practice more of this direct speaking and writing.



FOR *Precision*

JELENKO *Sturdicast*

REG. U.S. PAT. OFF.

FOR many, many years "Sturdicast" has occupied an enviable position among casting golds — for its rich gold color, resistance to mouth discoloration, remarkably high physical properties, and excellent casting qualities. These casting qualities now make it the outstanding choice among popular-priced golds for use in modern precision casting.

GOLD COLOR

for 1-piece and Unit Castings, Clasps, Bars, Saddles, etc.

Sold by Better Dealers
Used by Better Laboratories, Everywhere

PRICE
per dwt. $1.80

J. F. JELENKO & CO., INC.

Beautiful Is the California Country . . .

Not long ago a friend of mine, a dentist of quality and substance, took the California State Dental Board examination. He passed the examination and moved from his good practice in the Middle West to California. There he set himself up in a small city to enjoy California life. Soon to him there came the siren lure of a promised big time job with one of the chain advertising dentists. The letter that my friend received is one of the most facile pieces of sales writing that I have ever read. It is written to him in longhand by a man whom he has never seen, front man for an advertising chain that promises these things: part-time or full-time jobs with his dental chain; north California, south California, or the country in between; you can work when you choose or do any branch of dentistry that you like; you have no rent to pay, no salaries to meet, no equip-

st Partials . . . .

JELENKO

RECISION CASTING EQUIPMENT

ACUTROL"
for
um Investing

JELENKO ELECTRIC
INLAY FURNACE
for
Wax Elimination

"THERMOTROL"
All-Electric
Melting & Casting
Unit

JELENKO
Heat Treating and
Eliminating
ELECTRIC FURNACE

s Jelenko Precision Casting Equipment eliminates all the hazards and uncertainties present
scientific casting methods. It puts every step under positive, simple scientific control and
s castings of uniformly high quality, precision fit and maximum physical properties.

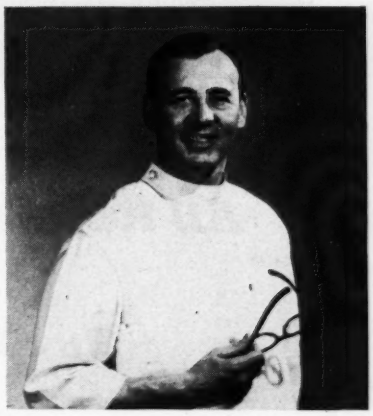
WRITE FOR DESCRIPTIVE LITERATURE AND PRICES OR CONSULT YOUR DEALER

DENTAL GOLDS AND SPECIALTIES
136 WEST 52nd STREET, NEW YORK 19, U.S.A.

ment to buy. You work in a group where everything is free. You can, in fact, be an administrator or a manager if you don't care too much about working at the dental chair. You are protected by old age and sickness insurance.

I imagine a great many dentists who move to California get letters like this, and I can also see how some of them will accept the lure. Many of the states have outlawed the advertising dentist and the blatant price promises. California is not the only state that still has the neon signs, the handbills, and the advertisers in their midst. Someday they will be fewer.—E. J. R.

BUY
SAVINGS BONDS



Here's why I chose
THE NARGRAF

The Nargraf's prompt-acting controls simplify technic and save time.

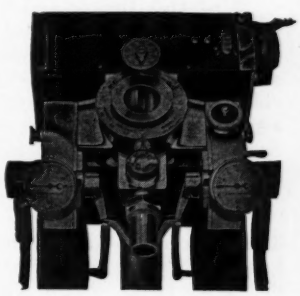
The Nargraf's intermittent flow principle assures a steady flow of gas with every inhalation.

By automatically co-ordinating the flow of gas with the breathing rate, the Nargraf does not have to be adjusted to every change in the patient's respiration.

With the Nargraf, a change in dosage reaches the patient almost instantly.

The Nargraf can be used for both anesthesia and analgesia.

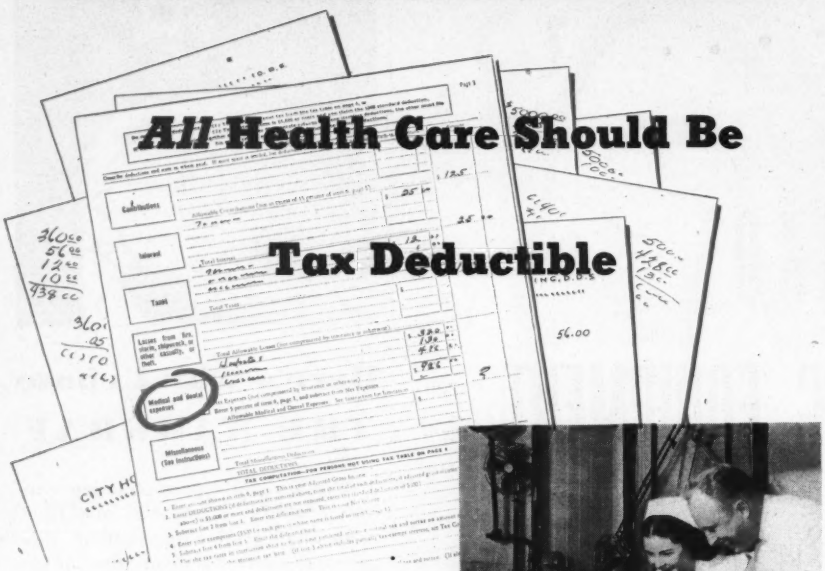
The design of the Nargraf is based upon intimate knowledge of dentists' anesthesia problems. That is why the manufacturer can confidently say:



Know the Nargraf, and the Nargraf will be your choice of a gas machine.

NARGRAF THE McKESSON APPLIANCE CO. N₂O McKESSON O₂ TOLEDO O. U.S.A. EUTHESOR
EASOR

In your ORAL HYGIENE this month



As you read these paragraphs, U. S. Congressmen are receiving reprints on one of the articles in the April issue of Oral Hygiene—Harold J. Ashe's "*All* Health Care Should Be Tax Deductible." This article is important to every dentist, every physician—and every taxpayer. It is not a plea for special tax immunity, but a sound plan to encourage adequate individual health care and create a healthier nation whose wage earners will earn more money and pay more taxes if they are in good physical condition.

★ ★ ★

"What One Dentist Did With His Office"—Here are practical suggestions on office decoration which every dentist can adapt to his own individual budget and requirements. The article is one of the series which American Institute decorators have written for Oral Hygiene.

★ ★ ★

"Have Little Mercy on Those 'Older' Dentists"—Doctor Robert R. Labriola, an ex-Service dentist, indicts a few of the "stay-at-home" dentists for "driving sound, intelligent dentistry back at least fifty years." Whether you agree or not, you will want to read this controversial article.

★ ★ ★

"Service For Sale"—Here is an unusual article written by a dentist who deliberately changed from a specialized practice in a large city to a general practice in a small community. His friends predicted disappointment, but Doctor Harry C. Peake found satisfaction and interest in solving the problems of a country practice and in meeting and treating the people of the farming community. If you are not happy in a large city, why not try Doctor Peake's formula?

★ ★ ★

"Gas Anesthesia is no 'Humbug'"—Do you hesitate to use nitrous oxide-oxygen? . . . It will pay you to read this interesting, informative article by Thomas G. Conte, D.M.D.

★ ★ ★

"The Dentist Considers Economics"—Here is an article defining the difference between economics as presented at dental meetings and economics as a study of "the work activities of people in an organized society for the purpose of satisfying their wants." Doctor M. R. Stern suggested that dentists, as administrators of their practices, must learn about this latter kind of economics if they are to be financially successful.

★ ★ ★

"Let's Change the Army Dental Corps Now"—How?—Doctor John W. Leggett, former Chairman, Special Committee on Military Affairs of the American Dental Association, explains how each dentist can help.

Surface Anesthesia of the Mucous Membrane

JOSEPH ANGELMAN, L.D.S.

Predisposing Factors

Hornification of Epithelium—Penetration of an anesthetic applied to an unbroken epithelial surface depends upon the degree of hornification.

1. The application of anesthetic solutions to the gingiva does not produce anesthesia (because normally the epithelium *is* hornified, although not always).

2. Similar solutions applied to the vestibular mucous membrane or that of the lips, cheek, or nose produce some degree of anesthesia (because the surface of the epithelium is *not* hornified.)

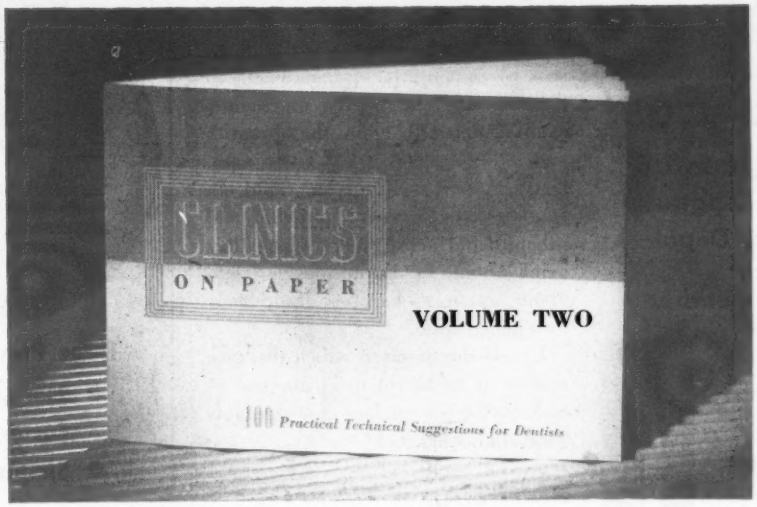
Pressure—1. If pressure is exerted upon a tampon of surface anesthetic, the resulting anesthesia may be more profound. This is because pressure upon the surface cells may be sufficient to cause tears between the individual cells and so permit a greater quantity of the solution to enter.

2. When the anesthetic is administered by pressure upon a rubber cup containing a tampon of the solution, its entry into the epithelial layers is by osmosis due to the negative pressure created beneath the rubber cup, together with the above.

These methods can only be successful on nonhornified epithelial surfaces.

Selective Affinity—Anesthetic solutions which act similarly when injected into the tissues do not produce the same result when applied locally. Procaine, compared with cocaine, is the outstanding example. Cocaine is still the most effective surface anesthetic while procaine, even in high concentration, has no surface anesthetic effect.

The answer may be that epithelial cells have a selective affinity for certain anesthetic solutions to the exclusion of others, which results in absorption of the solution into the deeper epithelial layers and action upon intra-epithelial nerve endings.



Volume Two of CLINICS ON PAPER

NOW READY!

This is a brand new volume of *Clinics on Paper*. Volume One is completely exhausted . . . it was a sell-out within approximately a year after it was announced.

Volume Two contains an additional 100 practical technical suggestions taken from the Clinical and Laboratory Suggestions Department of Dental Digest. *None of these has appeared in the first volume.*

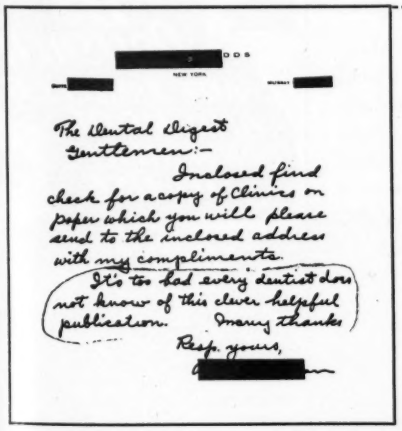
Volume Two is similar in appearance to Volume One with the exception of a different color combination. It is beautifully printed and each of the 100 suggestions is skillfully illustrated. The book is indexed as before and colored tabs designate various sections.

Practitioners who have the first volume will want this new one; those who do not have the first volume will want the new one anyway for its reference value. Price, only $1.00 to regular Dental Digest subscribers. We urge non-subscribers to refer to coupon for special combination offer.

★

FIRST EDITION A COMPLETE SELL-OUT

★


[redacted]

The Dental Digest
Gentlemen:—
Inclosed find check for a copy of Clinics on Paper which you will please send to the inclosed address with my compliments.
It's too bad every dentist does not know of this clever helpful publication. Many thanks
Resp. yours,
[redacted]

Dental Digest
1005 Liberty Avenue, Pittsburgh 22, Pa.

☐ Here is $1.00 for a copy of the second edition of CLINICS ON PAPER. I am a regular subscriber.

☐ I am not a subscriber. Please enter my subscription to Dental Digest for sixteen months and send CLINICS ON PAPER at special $5.00 combination price.

Dr. .....

Address .....

Dealer .....

RIGIDEX NEEDLES

Still the Best

Now Available in all *Gauges and Lengths at Your Dental Depot

Points to Remember

1. **RUSTLESS STEEL**
Not affected by Iodine, salts, and many acids.

2. **SEAMLESS TUBING**
No seam to open upon sudden bending.

3. **RAZOR-SHARP POINT**
Ground and honed to a spearpoint which promotes smooth and painless penetration of tissue.

4. **CAN BE FLAMED**
Proper flaming will not injure RIGIDEX NEEDLES.

5. **UNIFORM WALL THICKNESS**
Secures rigidity and strength and eliminates weak spots.

6. **RIGID**
Easy to maintain in a straight line.

7. **NON-SLIP BALL**
Made of nickel-silver alloy.

8. **RESIST BREAKAGE**
Will bend to 45 degrees without breaking.

9. **HAND-FINISHED POINTS**
Finished by experienced hands, they are superior to machine-cut points.

10. **DO NOT CLOG**
Always a uniform and free flow of the solution.

*23, 25 and 27 Ga.
1", 1¼", 1⅝", 1⅞"
Lengths

Use the coupon on page 211 to order your supply TODAY, or ask for sample needle.

INTERSTATE DENTAL CO., INC.
220 West 42nd Street
NEW YORK 18, N. Y.

Action of Escharotics

Phenol, volatile oils and cocaine in combination with phenol are escharotics. They (with special reference to phenol) rapidly destroy the soft tissues by causing the epithelial cells to disintegrate; the degree of disintegration depends upon the quantity and concentration used. Their anesthetic properties lie in the rapid coagulation of the intra-epithelial and subepithelial nerve fibers which they bring about. By virtue of this coagulant action escharotics limit their own penetration.

Unless the tissue to which they are applied is to be removed, the use of escharotics for surface anesthesia is contraindicated.

Sensitivity of Tissues

It has been established clinically that the sensory response to a given stimulus varies in different regions of the mouth. The most sensitive area is found on the vestibular mucosa, at the point of transition from the gingival mucosa. The least sensitive areas are the interdental papillae which decrease in sensitivity from the midline, distally. This applies labially, buccally, and palatally.

The explanation of this is probably functional adaptation. The areas which are subject to the greatest masticatory stress and severest stimuli do not respond to a given sensory stimulus as readily as other areas. For example:

1. The molar area deals with crunching and triturating food, and the mucosal tissues surrounding the teeth are the least sensitive.

2. In the incisor region, where stresses are not so severe, the tissues are more sensitive. The vestibuli are protected by the cheeks and lips from injury, and here the mucous membrane is not hornified. The response to sensory stimuli is, consequently, very acute.

Degree of hornification and sensitivity can thus be seen to be closely related.

Summary

1. Topical anesthetics applied to mucous membranes with hornified

THREE PROVEN WAYS

Three Proven Reasons

- **More Germicidal**
- **Faster Setting**
- **Simpler Technic**

All with

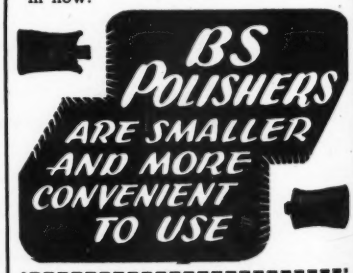
Write for booklet AMES

COPPER CEMENT

THE W. V-B. AMES CO.
Fremont, Ohio

Others Have Tried BS POLISHERS Why Not You?

Many dentists have sent in the coupon below and found out why BS Polishers are preferred over many others. They can readily understand why this soft, flexible rubber polisher makes a patient feel safe and comfortable, also why it is easy for it to clean and polish every tooth to a lustre brightness. Why don't you find out these facts for yourself? Send the coupon in now!



Young Dental Mfg. Co.
St. Louis 8, Mo.

Gentlemen:
Without any obligation send us one of your BS POLISHERS — ABSOLUTELY FREE.

NAME.....
ADDRESS.....
CITY.....
STATE.....

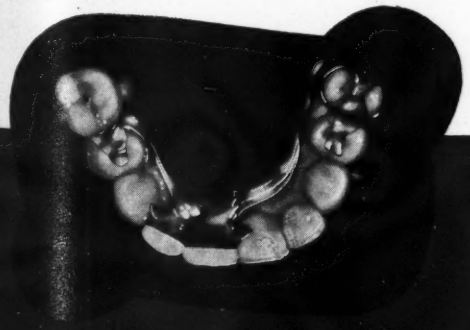
LOST A PATIENT!

THE TECHNICIAN

"—an anterior bridge from Dr. Z—and he specifies porcelain incisals. *I'm afraid* they won't give service. Of course, if I had a full mouth impression and a bite that I could set up on a good articulator . . . But *I'm afraid* Dr. Z would be impatient if I suggested taking another impression. If I could be sure that Dr. Z would check the articulation . . . I *should* call him about this case—But guess I'll just play safe and protect these incisals with metal."

THE DENTIST

"H'm, metal at the incisals. Miss G isn't going to be muched thrilled with this restoration. *I'm afraid* the technician hasn't much faith in porcelain incisals. Guess I'd better go along with his judgment in this case."



THE PATIENT

"Gee, Bess, I sure am disappointed in my new bridge. It certainly don't look natural like yours does. And I always thought Dr. Z was so up-to-date! What is *your* dentist's name again, Bess?"

DOCTOR:

Porcelain incisal facings have established an entirely new standard of esthetics for anterior restorations. They harmonize completely with adjacent natural teeth and surrounding tissue.

And you need have no fear on the score of serviceability of Steele's P. B. E. facings if your technician has articulated the bridge, using full models on an articulator capable of duplicating *all* the motions of the jaw . . . *Or* if you carefully balance the bite before dismissing the patient. It should never be taken for granted that an artificial tooth cannot strike an opposing tooth with the full force of mastication simply because it seems to be in articulation when the jaw is at rest.

When reasonable precautions are followed you will find that restorations with porcelain incisals give thoroughly satisfactory service.

THE COLUMBUS DENTAL MANUFACTURING CO.

COLUMBUS 6, OHIO

Steele's P. B. E. PORCELAIN BITING FORCE NEW HUE FACINGS

The New Hygienic THERMOLATOR

The Thermolator is an automatic constant-temperature water bath, designed to enable you to produce better acrylic dentures with less time and effort. Just put in your clamps, set the Timer and Temperature, *and the Thermolator does the rest!*

Features Include—

Electric Interval Timer for automatic timing—1 to 5 hours.

Electric Temperature Control. *Range* 100°-200° F.

Panel Switch for instant change from "continuous" to "timed" operation.

Capacity: Ten Flasks (five 2-case clamps).

Model B-10, $160. Order from your dealer.

Model B-10
110 volt A.C.

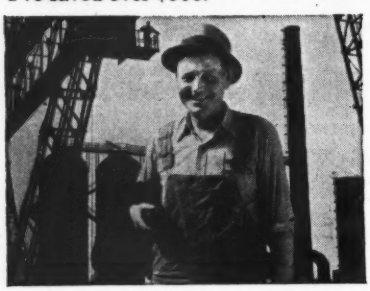
THE HYGIENIC DENTAL RUBBER COMPANY
Akron 8, Ohio **U. S. A.**

PICTURE QUIZ: Which one of these people gives the right reason for buying U.S. Bonds?

(ANSWER BELOW)

1. **Easy to save!** "I'm putting my money into U.S. Bonds because it's the *easiest way* for me to save. So far, I've saved over $500!"

2. **Plans for the future!** "Ten years from now, the money I'll get for my U.S. Bonds will help to send my kids to college, or buy our family a new home."



3. **Rainy day!** "Maybe a rainy day's coming for me. Maybe it isn't. But I'm buying all the U. S. Bonds I can through my Payroll Savings Plan."

THE ANSWER

Every one of these people gives the "right" reason—because there's more than one right reason for buying U.S. Bonds.

Whichever way you buy them—through Payroll Savings, or your local bank or post office—U.S. Bonds are the best investment you can make!

SAVE THE EASY WAY...BUY YOUR BONDS THROUGH PAYROLL SAVINGS

epithelial surfaces are of no clinical value.

2. Topical anesthetics are most effective when applied to a nonkornified epithelial surface, the cells of which have been disturbed by pressure.

3. Epithelial cells may exhibit a selective affinity for certain anesthetic agents.

4. Areas of low sensitivity should be noted when employing infiltration techniques.

—From *The British Dental Journal* 81:320-321 (November 15) 1946.

Acute Secondary Parotitis

THE AGES of 49 patients with acute secondary parotitis ranged between seven and eighty-four. All but two of the patients were debilitated by some primary disease or injury. One of the causal factors was poor oral hygiene. Dehydration, mouth breathing, suppression of salivary secretion, and the existence of dental caries favored the development of an ascending infection along Stensen's duct.

A sharp elevation of body temperature, pulse rate, and white blood cell count usually occurred.

Treatment

Lugol's solution was administered at the earliest opportunity. Treatment for the primary disease was continued and supportive therapy included the use of hot compresses.

Results of Treatment

Massive doses of Lugol's solution gave satisfactory results. Penicillin therapy in a small number of instances showed much promise. One patient responded who failed to respond to Lugol's solution. With both forms of treatment resolution occurred in all but one of the early cases. Abscess formation was more likely to develop in older cases of three or more days' duration before the start of therapy. (Draining of abscesses is advised in conjunction with chemotherapy.)

Although 15 of the 49 patients died, in 13 of these 15 the parotitis had

(*Continued on page* 209)